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PRELIMINARY INVESTIGATIONS OF THE  
PREHISTORIC EARTHWORKS IN ELK COUNTY, PENNSYLVANIA

1975

by

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We would like to extend our thanks to Mrs. Virginia Oyler, Saybrook, Pennsylvania for making her collections from the earthworks available for research and recording. Special appreciation is expressed to Mr. Donald H. Culp, artist for the William Penn Memorial Museum, for his work in preparing the final illustrations used in this report.



## ABSTRACT

Three well-preserved earthworks located in the Allegheny National Forest of Pennsylvania are considered in this report. They are the McKinley, Kane, and Russell City Earthworks, and they represent practically the last known surviving examples of this type of site in Pennsylvania. Similarities in their geographical locations, configurations, settlement patterns, and material culture content are noted. Other earthworks that existed at one time in parts of Pennsylvania and western New York are discussed in general.

The primary emphasis of the report is on the archaeological exploration of the McKinley Earthwork. This excavation, the mechanics of earthwork construction, and the findings are described in detail. It is suggested that McKinley represents a typical Late Prehistoric seasonal village of an as yet unnamed culture complex related to the so-called McFate culture in western Pennsylvania and the Susquehannock culture in eastern Pennsylvania. The sphere of influence of this complex is defined as northwestern Pennsylvania and southwestern New York with peripheral extensions as far north as the Genesee Valley, New York and east into the West Branch Valley of the Susquehanna River.

Recommendations for future research and eventual preservation of the sites are made at the conclusion to this report.



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## MCKINLEY EARTHWORK (36 EL 17)

### Introduction

The Allegheny National Forest is located in the northwestern portion of Pennsylvania in the physiographic division of the country known as the Appalachian Plateau Province (Fig. 1). This is a rugged area composed of high, flat-topped uplands dissected by numerous deep river and stream valleys. The Allegheny River flows southward along the northern and western boundaries of the Forest where the upland begins to merge with the rolling agricultural hinterland, stretching northwest toward Lake Erie.

The McKinley Earthwork, one of several sites of this type in the Allegheny National Forest, is located five miles northeast of Russell City in the extreme northwest corner of Elk County at  $41^{\circ}35'32''$  north latitude and  $78^{\circ}52'27''$  west longitude (U. S. Department of Interior, Geological Survey Map, Russell City Quadrangle, 7.5' Series, 1966).

The site rests at an elevation of 1884 feet above mean sea level on a long lobate or egg-shaped summit of land (Fig. 2). To the north and south, and to some degree in the west, the terrain drops acutely to the Wolf and Coon Run Valleys respectively. These small rock-strewn streams then carry their waters west to the Tionesta Creek and ultimately to the Allegheny River, one of the main constituents of the Upper Ohio Valley Drainage. East of the site the summit rises to an even higher elevation before plunging downward to the valley floor. The contours of the land beyond and to the east of the earthwork embankment suggest that an ancient spring in that area had at one time furnished water for the inhabitants of the village.







Figure 1. Northwestern Pennsylvania and the Allegheny National Forest  
1975.

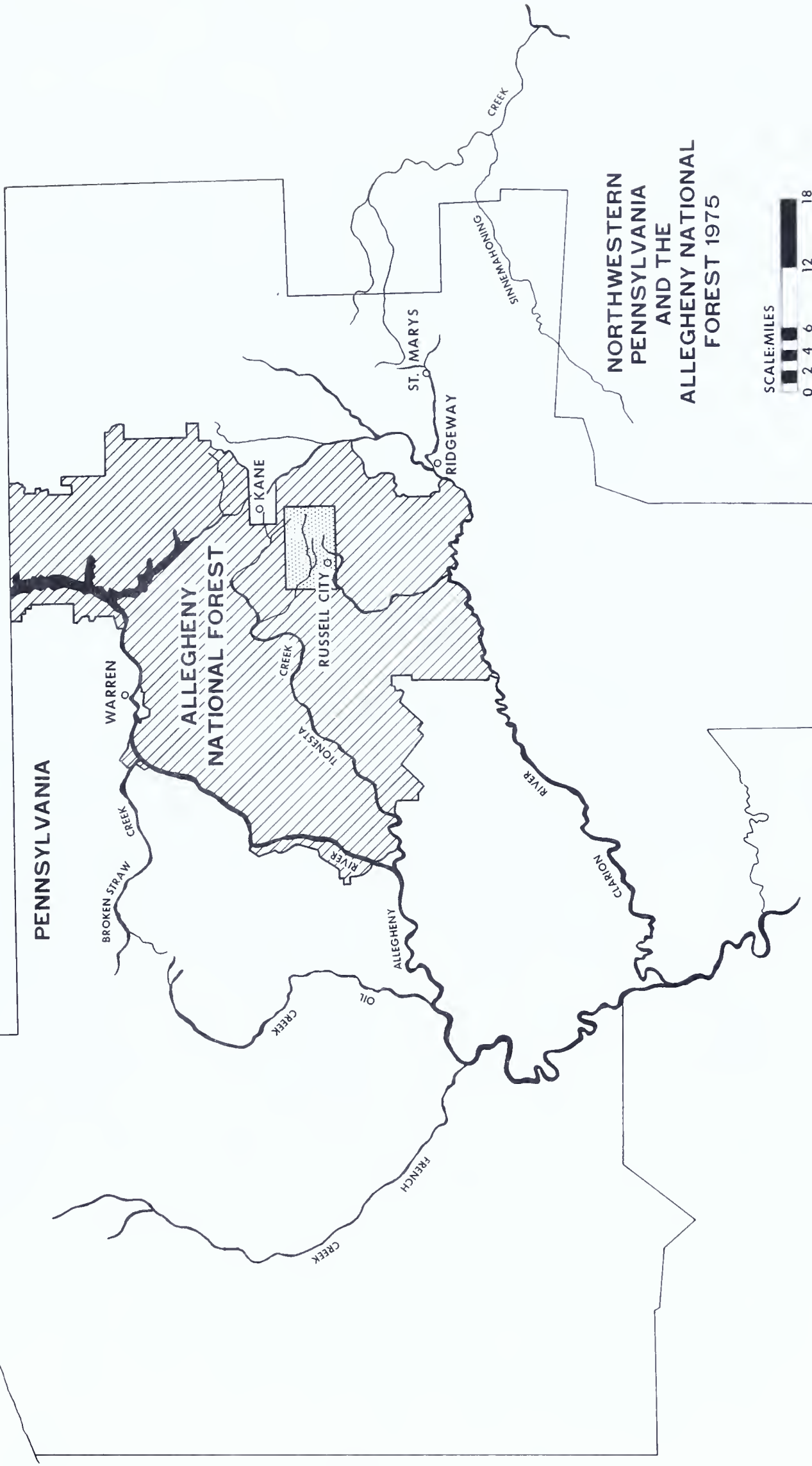
The stippled area locates the Elk County earthworks at the headwaters of the Clarion River and Tionesta Creek, part of the Upper Ohio Valley Drainage System. The Sinnemahoning Creek flows eastward from St. Marys into the West Branch of the Susquehanna River.

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PENNSYLVANIA  
AND THE  
ALLEGHENY NATIONAL  
FOREST 1975

SCALE:MILES







Figure 2. Topographic Map Locations of the Elk County Earthworks.

This portion of the Russell City 7.5' topographic map shows the locations and the physiographic and geographic relationships between the Kane, Russell City, and McKinley Earthworks. All three sites are situated on high, flat-topped mountains amidst the oil fields of northwestern Pennsylvania.



KANE EARTHWORK (36 EL 1)

BM  
1796

Wolf Run Roadside  
Spring Park

McKINLEY EARTHWORK (36 EL 17)

1849

Wolf

RUSSELL CITY EARTHWORK (36 EL 2)

Run

BM  
1791

Coon

Chaffee

BM  
1526

OIL FIELD

BALTIMORE

Oil Well

Russell City





Oil was discovered in northwestern Pennsylvania in 1859 and extensive explorations were conducted throughout the latter part of the 19th century. Some wells are still producing today. A multitude of oil and gas lease roads and their associated wells create a labyrinth of corridors scarring this section of Pennsylvania's scenic woodlands. One old lease road leads from the south north-northeast to the site, subsiding in many places to create numerous quagmires that render the road passable only by four wheel drive vehicles or on foot.

### Environment

The United States Forest Service established Pennsylvania's Allegheny National Forest in 1923 and since that time has acquired and preserved more than a half million wilderness acres in Elk, Forest, Warren, and McKean Counties.

Most of the forest is composed of northern hardwoods. Noteworthy are the great stands of cherry, oak, ash, beech, and maple. Hemlock, birch, and numerous forms of riparian flora dominate the lower elevations. Remnants of decayed hemlock and white pine trees three to four feet in diameter attest to the environmental conditions that existed before the lumbering industry and subsequent forest fires decimated these species to very small numbers confined to isolated pockets.

Various forms of aquatic life live in a compatible environment essential for maintaining the ecosystem. The forest provides a continuing supply of "browse" to sustain large populations of white tail deer. Black bear,



squirrels, rabbits, wild turkey, grouse, other non-game animals, and predators live in symbiotic accord with one another in the hardwood forest of northwestern Pennsylvania.

### Problem and Objectives

The McKinley Earthwork has suffered repeated damage. Evidence of logging can still be observed as old skid trails and roads. Oil and gas operations have disturbed the area with pipelines and well sites. The close proximity of the site to public roads and the publicity it received in the early 20th century also contributed to the present status of the earthwork. The most destructive force has been the unscrupulous relic hunter. For these reasons, McKinley became to the trained archaeologist a kind of salvage venture. An attempt was made to dispel some of the mystic that has surrounded the site for generations before destructive forces so altered the data that the true picture would be lost forever.

The primary archaeological objectives were (1) to determine the nature and construction of an earthwork in a relatively undisturbed environment, and to compare this earthwork with floodplain sites that were presumably constructed in a similar fashion; (2) to ascertain and identify the function of the village and the internal settlement system; and (3) to identify a cultural affiliation, if any, with the Late Prehistoric McFate culture in western Pennsylvania and/or the Late Prehistoric Susquehannock culture in eastern Pennsylvania.



## Methods

Initial excavations at the McKinley Earthwork were begun in July, 1975 and continued for five weeks ending in the middle of August of the same year. Since the area of interest included the earth embankment, associated ditch, and the internal land surface, much of the wood debris that had fallen from the forest canopy had to be removed. This was undertaken by a field crew consisting of five members. Approximately two acres were cleared using axes, wedges, levers, ropes, and a considerable expenditure of human energy. This phase of the work was accomplished in less than two days.

The exposed embankment or mound was then delineated with orange colored plastic ribbons tied to 18 inch black stakes placed at five foot intervals around the perimeter of the site. A permanent datum point was established in the center of the enclosure and marked with a 3/4 inch diameter, two foot long steel rod. The site was mapped utilizing a surveyors transit and several 100 foot tapes. Each orange marker could be sighted through the transit with the aid of a stadia rod and the degree reading and distance were recorded to permit accurate location of the point on the construction plot plan (Fig. 3).

Next, north-south trenches three feet in width were located in various parts of the site in order to answer specific questions. The actual boundaries of the village were determined, postmolds were located on the embankment, mound and ditch construction was defined, one entryway was confirmed and another possible entryway explored, concentrations of features and material culture were found, and an area of high artifact density was examined for associated postmold patterns.

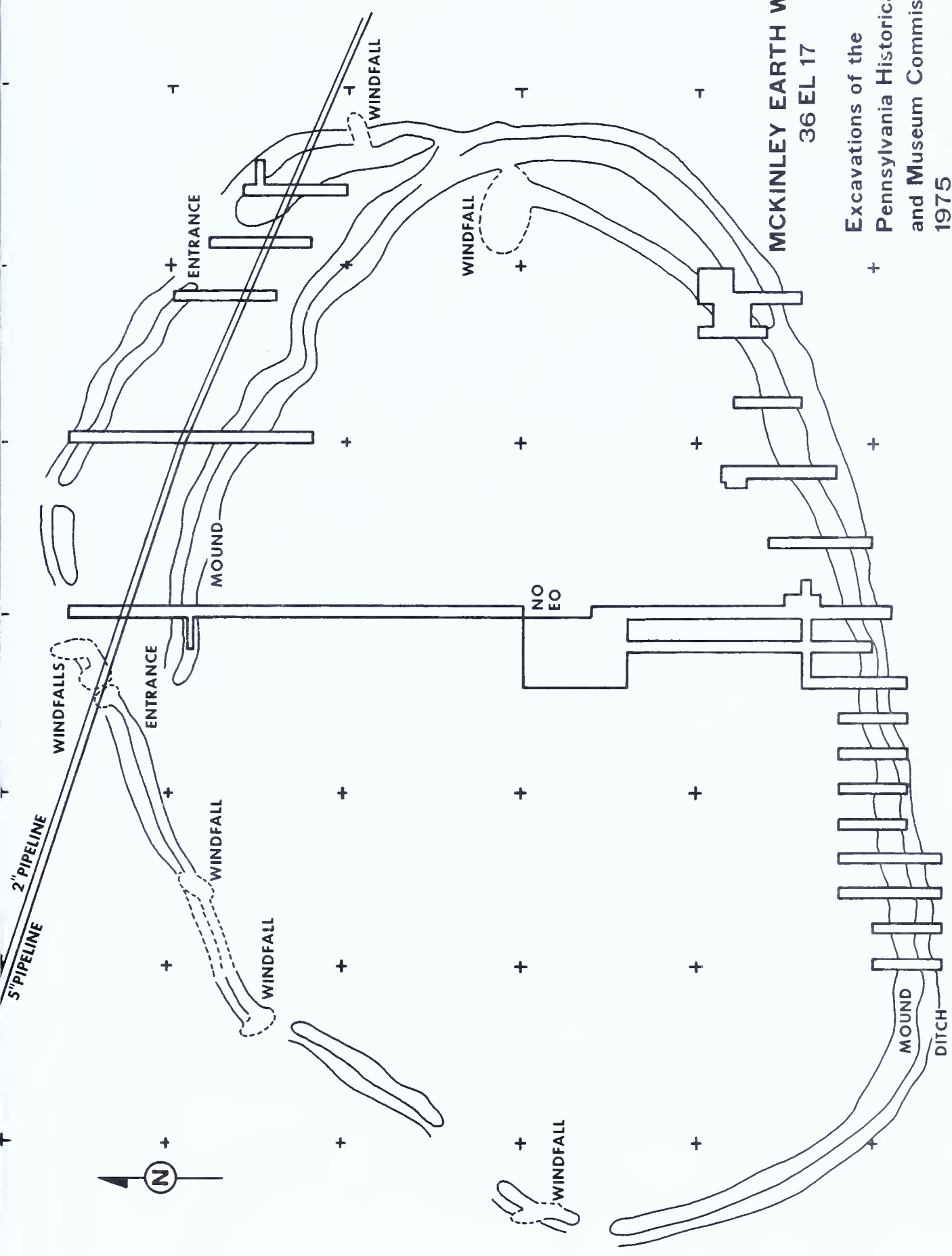






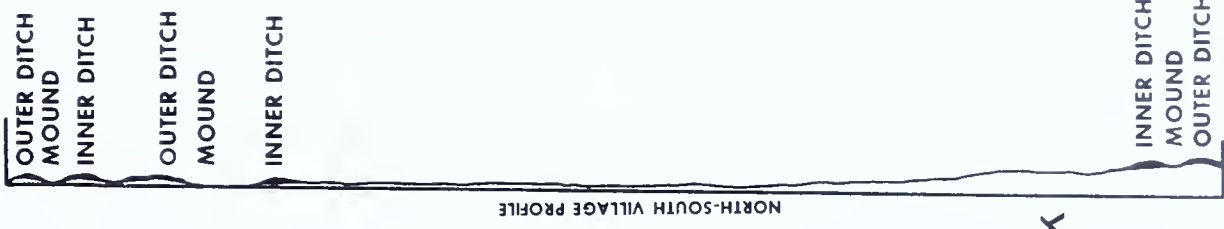
Figure 3. McKinley Earthwork (36 El 17): Excavations of the Pennsylvania Historical and Museum Commission 1975.

The plot plan shows the existing embankment and ditch, the northeast entryway, and the numerous test trenches excavated during the 1975 field season. A north-south profile of the village contours is drawn to the right.



MCKINLEY EARTH WORK  
36 EL 17

Excavations of the  
Pennsylvania Historical  
and Museum Commission  
1975





Garden rakes, hoes, trowels, and root cutters were employed to remove the forest humus and stoloniferous plant growth and recover the material culture from the site. The nature of the plant growth in the upper zones considerably restricted the area that could be opened and the number of artifacts recovered during the field season. Examples of the standard forms that were used to record the archaeological data can be found in Appendix A.

### Soil Morphology

Soils in the southern part of the Tionesta Creek watershed in Elk County fall within the Hazleton-Gilpin-Ernest classification. The Hazleton soils, which predominate in the higher elevations along the ridges and slopes and in the vicinity of the McKinley Earthwork, are permeable, sandy, and underlaid with fractured angular sandstone bedrock. The shallow, rocky nature of these soils and the relatively short frost free growing season in this part of the state combine to produce unfavorable conditions for agricultural production.

The uppermost soil zone (A00) at the McKinley Earthwork consists of leaves, wood, and decayed matter of recent forest origin for a depth of approximately one inch. Immediately below is a second zone (A0) about three inches thick containing dark gray to black humus and village midden. The A0 zone contains for the most part, excluding features, much of the material culture found at the site. The underlying tannish-yellow zone (B1) is completely devoid of artifactual debris (Fig. 4).

### Settlement Pattern

#### Mound Construction and Stockade

The irregular mound or embankment which surrounds the village compound





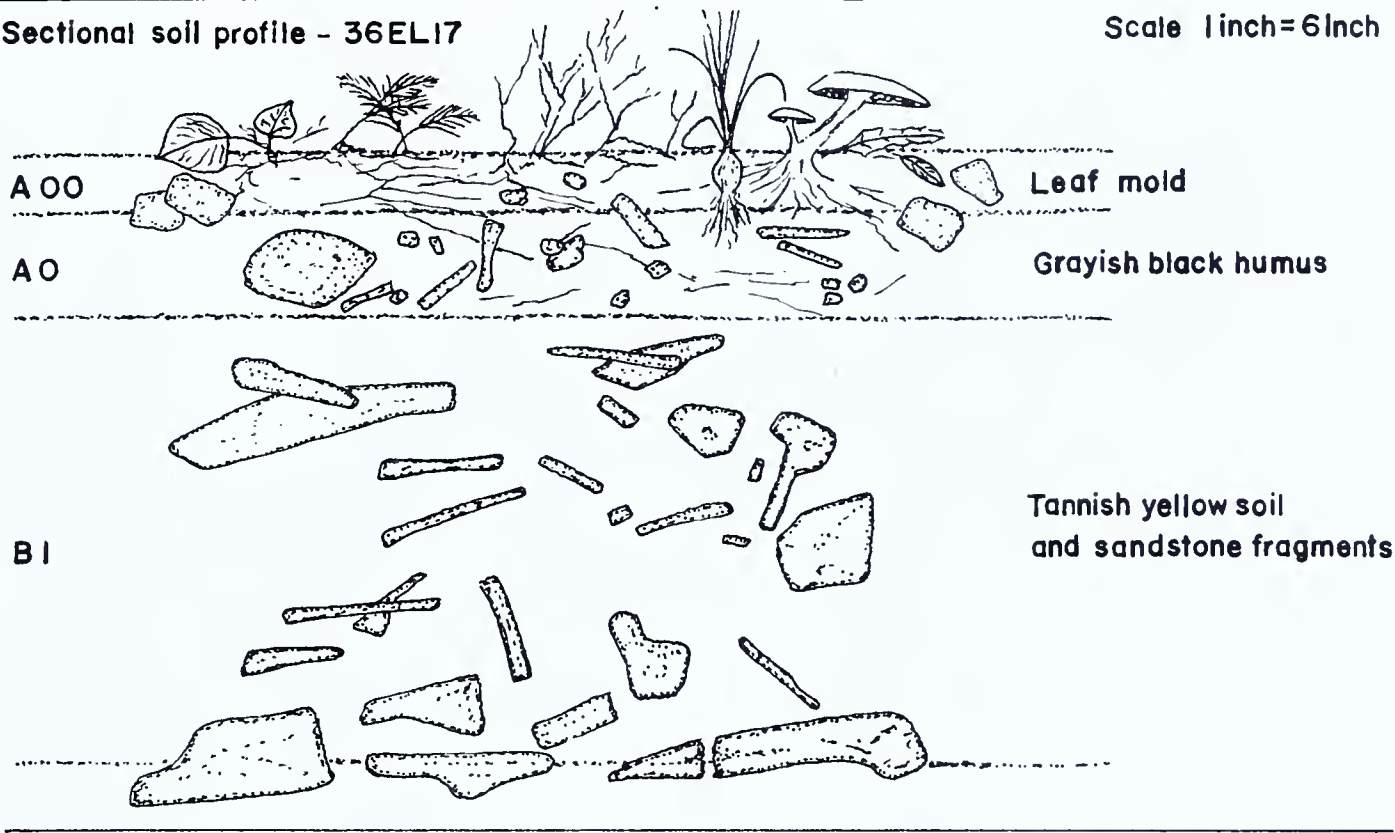
Figure 4. Sectional Soil Profile and Feature Configurations at the McKinley Earthwork (36 E1 17).

The top portion of this figure illustrates the three distinct A00, A0, and B1 soil zones present at the site. The eight types of features encountered during the excavations are shown in the bottom part of the figure.



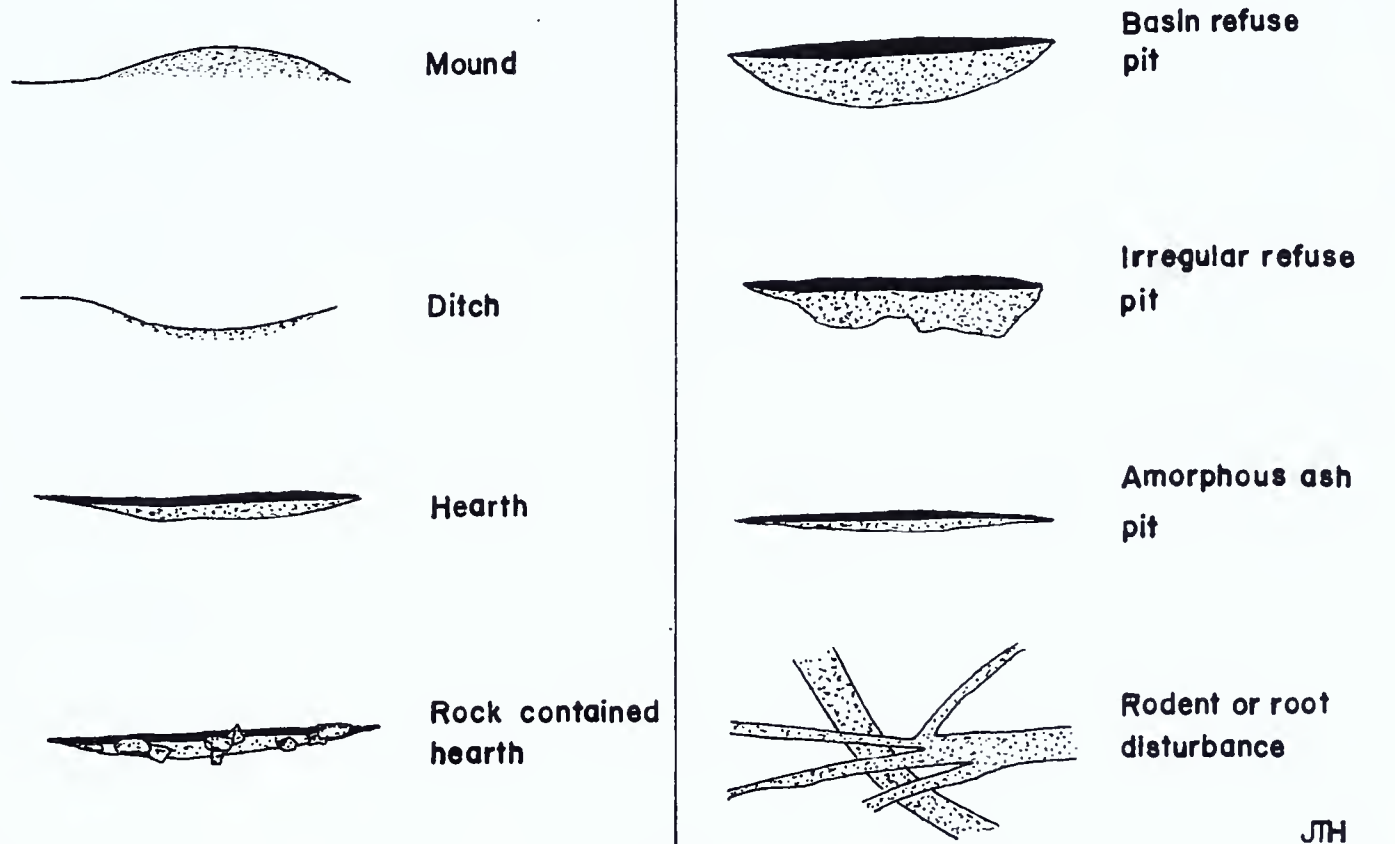
Sectional soil profile - 36EL17

Scale 1 inch=6 inch



Feature configurations - 36EL17

Scale - miscellaneous





is neither consistent in height nor breadth. On the average, it is about five feet wide at the base, two feet high, and encloses an area measuring approximately 230 feet by 315 feet. Twenty-one trenches bisected the mound at various locations around the earthwork. Cross sectional cuts showed the composition to be a loosely heaped mass of soil and sandstone fragments that had been secured from two parallel depressions excavated along the interior and exterior margins of the embankment (Figs. 5-6). These ditches contained a random distribution of material culture throughout. The interior ditch, especially in the southern portion of the site, seems to have been utilized as a dumping area for much of the village refuse. The external ditch contained very little midden, only a few lithic fragments and a small amount of ash and charcoal.

The embankment in general appears to have been constructed to facilitate stockade fabrication. Since it would have been virtually impossible for wooden posts to have penetrated the rocky soil for more than six or eight inches, it was necessary to raise the level of the ground to provide adequate support for the fortification wall. This was accomplished by obtaining as much rock and earth as possible from both sides of the proposed stockade line.

Postmolds on top of the mound and within the village were almost impossible to define. Through assiduous excavation and prior experience it was discovered that they could be located with difficulty under the reasonably uniform lighting conditions that occur early in the morning. Postmolds that were from three to five inches in diameter, and elongated amorphous stains situated slightly inward from the medial ridge of the mound marked the actual location of the stockade. The manner in which many of the posts had been





Figure 5. McKinley Earthwork (36 El 17): Features Discovered during the Excavations of the Pennsylvania Historical and Museum Commission 1975.

Postmolds, refuse pits, fire hearths, and sections of the internal and external ditch are represented by the blackened areas on the site map.

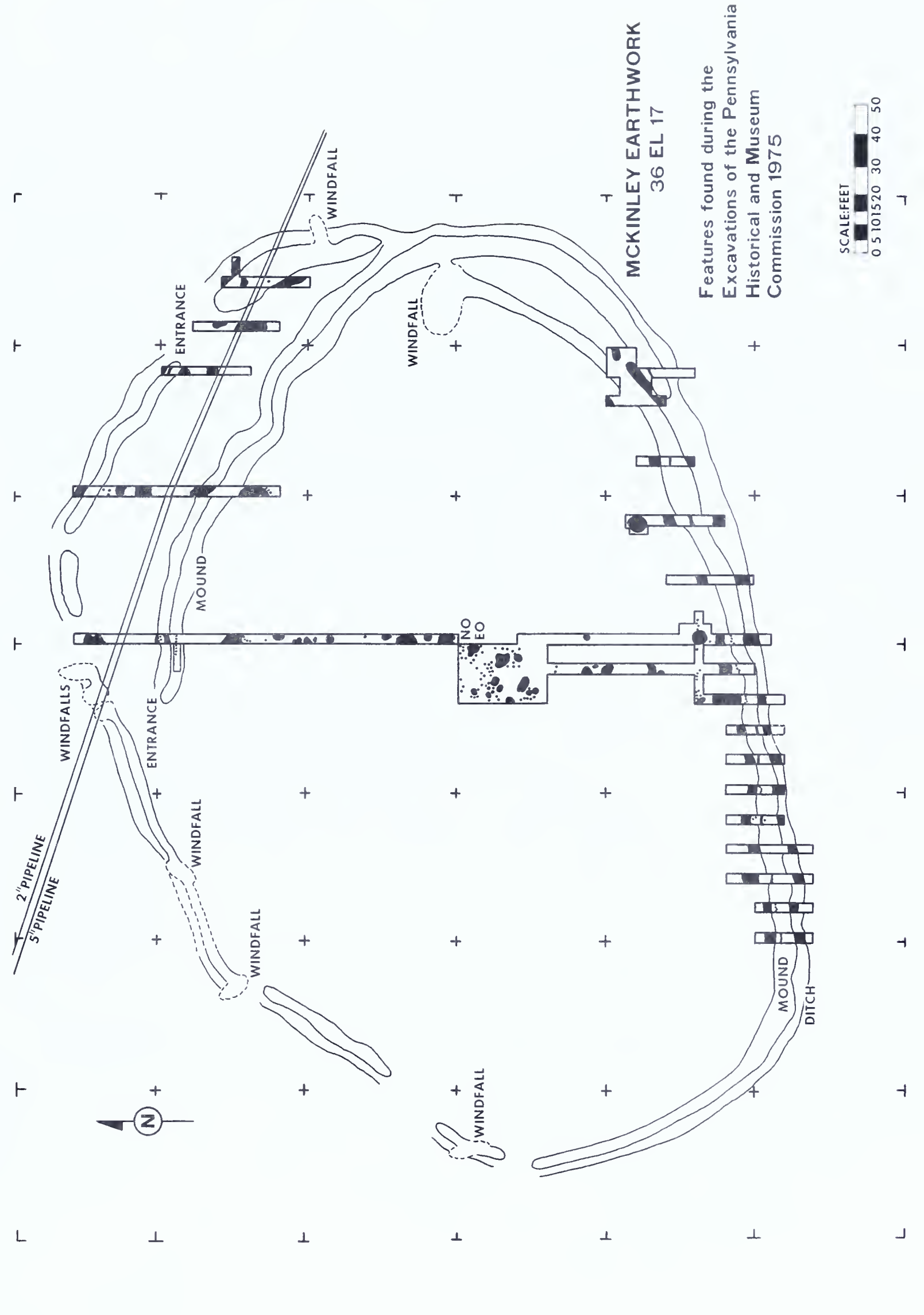




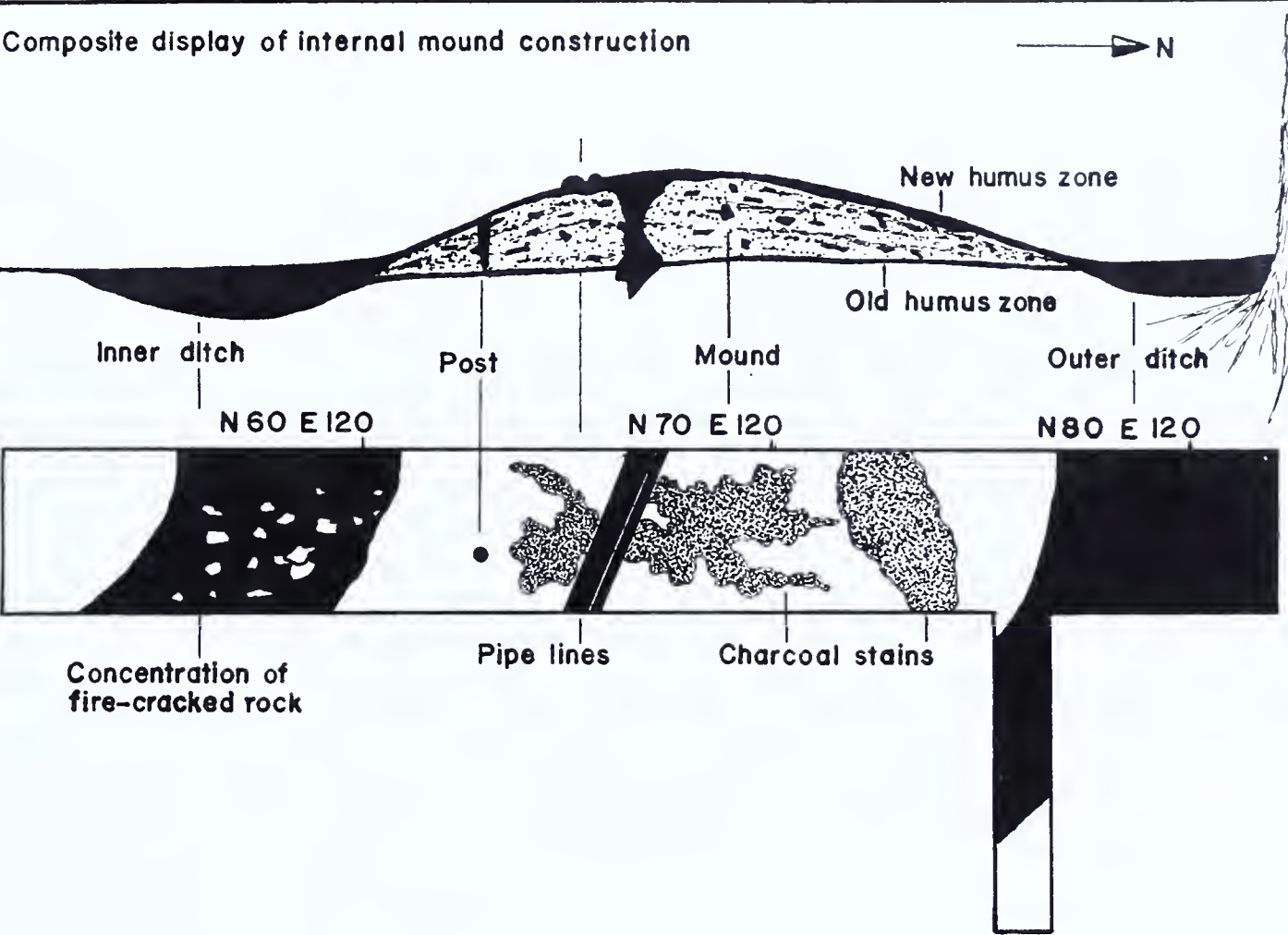




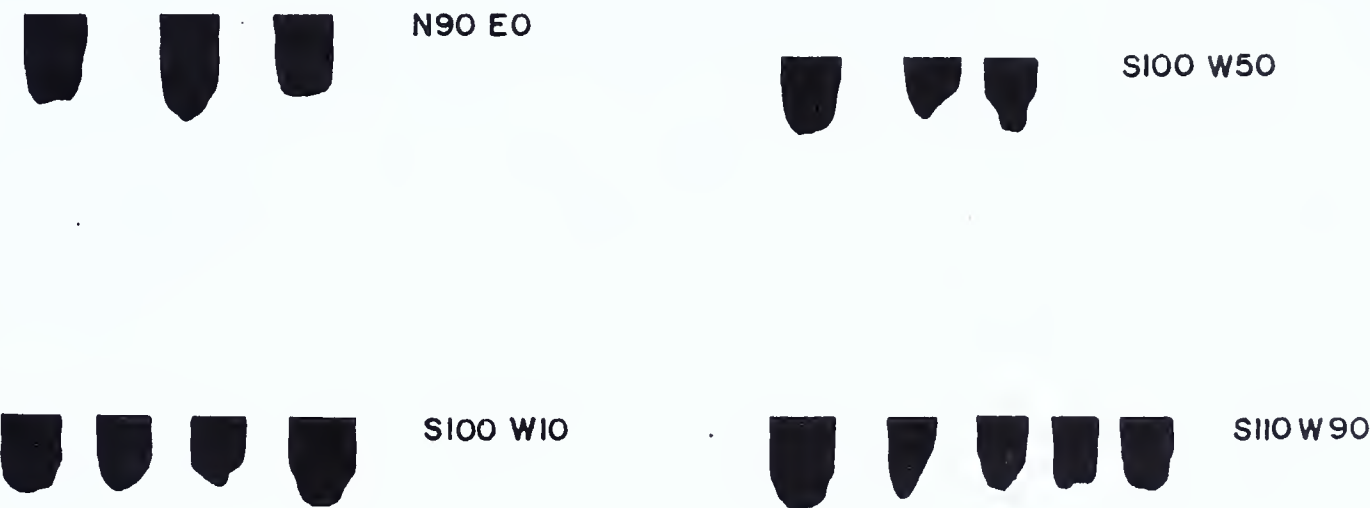
Figure 6. Composite Display of Internal Mound Construction and Cross Sections of Selected Stockade Postmolds at the McKinley Earthwork (36 El 17).

The schematic drawing in the upper part of the figure shows the mound construction and its relationship to the internal and external ditches in the northern section of the earthwork. The shapes of various stockade postmolds are illustrated below.

Composite display of internal mound construction



Selected postmold cross sections (stockade)





lodged suggested that the stockade wall was uneven. This construction was probably dictated by the random positions of sandstone fragments within the mound itself. Postmold confirmation was established for the north, southeastern, and southwestern peripheries of the site.

### Internal Settlement System

An area of 600 square feet was opened in the central portion of the enclosure, west of the base line from N0 to S30 (Fig. 7). A series of features and postmolds were uncovered. Features were clustered and numerous postmolds were located nearby suggesting activity areas and possible house walls. The postmolds lay in a general northwest-southeast orientation and suggested a circular or oval configuration. However, this finding is by no means conclusive. The paucity of postmolds and their lack of uniformity may in part be due to rodent activity and soil disturbances that result from windfall action. With this in mind, and considering the small area opened during the 1975 season, it is understandable why it was difficult to delineate and confirm an internal settlement system. Future field research should provide additional data relative to this question.

### Features

Thirty-five disturbances were located and explored at the McKinley Earthwork. Most were only partially excavated since they were only exposed within the north-south trenches. Those that were considered to be particularly important were completely exposed, excavated, and recorded. The features have been grouped into the eight categories that are described below (Fig. 4).



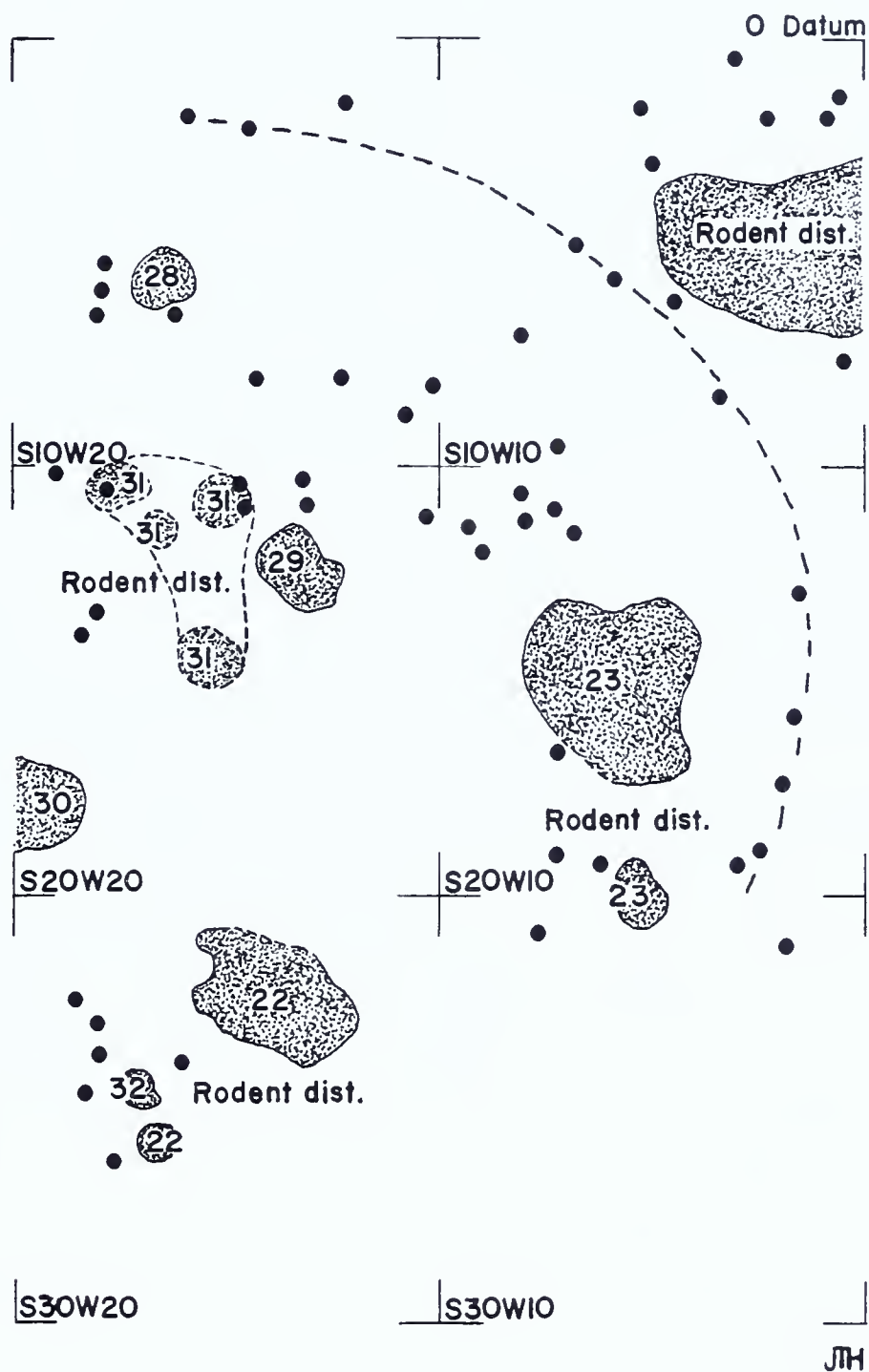


Figure 7. Internal Settlement System at the McKinley Earthwork  
(36 E1 17).

Six squares or 600 square feet were excavated southwest of the datum point. Numerous small features were clustered in squares S10W20-S20W20 inside what might be the wall of a circular or oval-shaped living structure.



Internal settlement system 36EL17





### Mound (Embankment)

Description: Semielliptical in cross section with sloping sides that intersect the interior and exterior ditches.

Measurements: Width, 5 feet; maximum height, 2.5 feet.

Contents: Brownish tan and yellow soil mottled with charcoal and fragmented angular sandstones.

Associations: Horizontal lenses of ash and charcoal within the matrix at several points along the southern extension of the embankment.

Postmolds three to five inches in diameter and approximately 13 inches deep, and amorphous charcoal stains along the medial ridge of the mound.

### Ditch (Interior)

Description: Semiovoid in cross section with one side rising abruptly to the surface of the embankment.

Measurements: Width, excavated ditch averages 3 feet; depth, excavated ditch averages 8.5 inches.

Contents: Brownish gray and black soil ~~inter~~mixed with village midden and angular fragments of fire-reddened sandstone. Flint and chert detritus, fragments of celts, hammerstones, and shell-tempered pottery.

Associations: Undifferentiated ash and charcoal lenses and reddish brown clay mixed with ash and bits of material culture. Contents and associations attest to the function of this feature not only as a source of soil for mound fabrication, but also as a depository for village debris.



### Ditch (Exterior)

Description: Semiovoid in cross section with one side rising abruptly to the surface of the embankment.

Measurements: Width, excavated ditch averages 7.7 feet; depth, excavated ditch averages 2.1 feet.

Contents: Brownish tan soil with small sandstone fragments located near the bottom of the feature. Chert detritus the only material culture recovered.

Associations: Undifferentiated ash and clay laden soil.

### Hearth

Description: Thirteen well defined hearths were found within the confines of the embankment. Generally oval or circular in configuration and slightly basin-shaped in cross section. Matrix composed of undifferentiated reddish orange soil and gray ash with traces of charcoal concentrated at the bottom. Some hearths completely surrounded by hard baked white and tan clay.

Measurements: Length, 15 - 60 inches; width, 15 - 48 inches; depth, 3 - 9 inches.

Contents: Flint and chert detritus, complete and broken triangular projectile points, bits of calcined and/or burnt bone, and shell-tempered pottery.

### Rock Contained Hearth

Description: Four hearths were excavated that contained rock concentrations. Generally oval to circular in configuration and basin-shaped in profile. Fill composed of fire-fractured sandstones inter-



mixed with reddish gray and brown soil. Flecks of charcoal concentrated at the bottom above a lense of yellow and/or tan soil. Hard baked clay immediately around and below the hearth.

Measurements: Length, 16 - 32 inches; width, 19 - 36 inches; depth, 5 - 8 inches.

Contents: Flint and chert detritus, shell-tempered pottery, and an occasional carbonized hickory nut shell.

#### Basin Refuse Pit

Description: Five disturbances were classified as basin-shaped refuse pits. Usually circular in configuration and basin-shaped in profile. Fill composed of sandstone fragments mixed with reddish brown and black soil accompanied by traces of ash and charcoal.

Measurements: Length, 12 - 80 inches; width, 12 - 80 inches; depth, 5 - 12 inches.

Contents: Flint and chert detritus, triangular projectile points, bits of burnt animal bone, carbonized corn kernels, and fragments of shell-tempered, incised collared pottery. Lump of potters clay associated with Feature 14.

#### Irregular Refuse Pit

Description: Two relatively large disturbances fit into this classification. Boundaries irregular in outline and cross section. Fill composed of reddish brown ashy and black soil, fire-cracked rock, and charcoal.

Measurements: Length, 50 - 52 inches; width, 24 - 36 inches; depth, 9 - 14 inches.





Contents: Flint and chert detritus, miscellaneous flint tools, river or creek cobbles, and shell-tempered rim and body sherds.

#### Amorphous Ash Pit

Description: One disturbance located in the S50W10 trench appeared to represent a single aboriginal fire. Roughly circular in outline with a slight basin-shaped profile. Pit fill composed of undifferentiated brownish gray soil and gray ash.

Measurements: Length, 16 inches; width, 16 inches; depth, 3 inches.

Contents: None.

#### Rodent or Root Disturbance

Description: Three areas were identified as rodent or root disturbances. Defined by dark humus-like amorphous lines that traverse one another in a criss-cross fashion creating problems when plotting the exact provenience of material culture in the area.

Measurements: Length, 2 - 72 inches; width, 1 - 16 inches; depth, 3 - 8 inches.

Contents: Dark brown and black soil, hair-sized rootlets, chert detritus, and pottery sherds.

### Artifacts

#### Ceramics

Approximately 1200 shell-tempered ceramic sherds and 16 sand-tempered sherds were recovered from the excavation. Because the sample is small and the sherds highly fragmented, percentage relationships were not used in sorting and analyzing the material. Five categories of pottery are described in the following sections.



### Shell-tempered Incised Collar Variety

Eighty-six rims or near rim sections represent this variety (Fig. 8 A-C). The vessels are characterized by high bulbous collars which constrict sharply at the base to form the neck and subsequent shoulder. The body appears to be globular and the surface is completely embellished with overlapping oblique and vertical cordmarking. Most of the collars retain remnants of this cordmarking beneath the incised design. Only a small percentage were wiped smooth before the decoration was applied.

The collars vary from 2 1/4 inches to 2 3/4 inches high. These, in turn, are decorated with combinations of from 4 to 11 horizontal and from 4 to 14 oblique lines spaced to form parallelograms and trapezoids around the circumference of the vessel. A single row of fingernail nicks or round punctates was used to decorate the base of the collar. Corded punctates and paddle edge gashes traverse the flat to slightly rounded lip. One specimen displays an incised line paralleling the vessel opening and another castellated rim exhibits a single row of punctates just beneath the lip. The latter example is sand-tempered but otherwise identical to the remainder of the sample.

The variety is similar to McFate Incised (Mayer-Oakes 1955) and to Reeve Opposed (Fitting 1964), considered by many to be one and the same ceramic type. It is reported from the Westfield site in New York (Guthe 1958), the Johnston site in Indiana County, Pennsylvania (Dragoo 1955), and has been found by the junior author in rock shelters in the upper portions of the Clarion River Valley.

### Shell-tempered Corded Collar Variety

Seventeen examples were classified in this category (Fig. 8 D). The

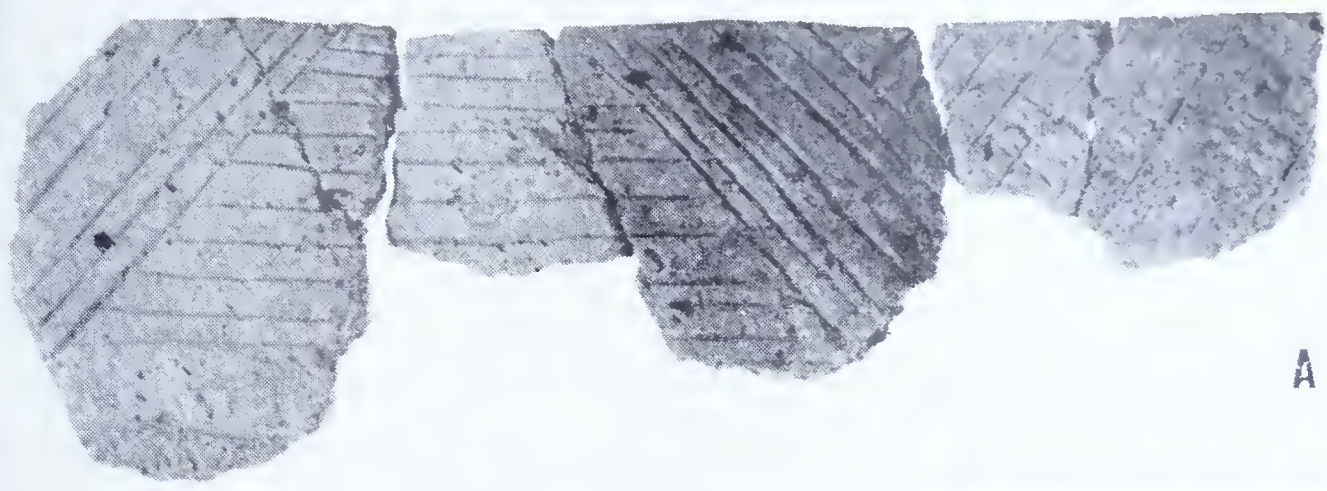




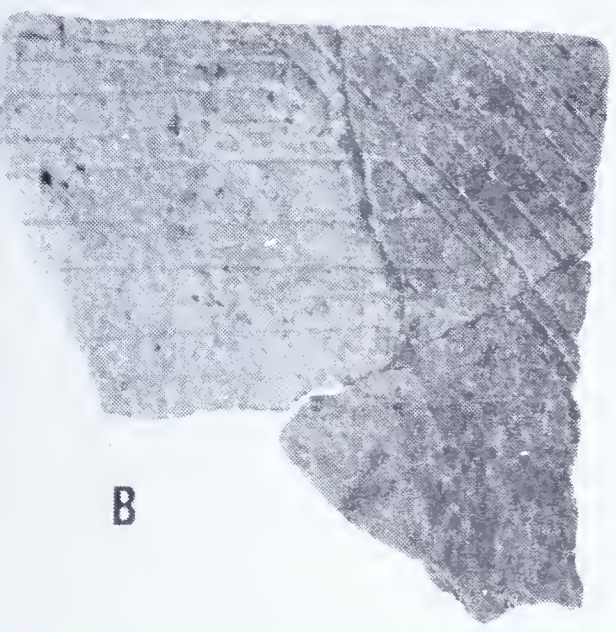
Figure 8. Ceramic Artifacts from the McKinley Earthwork (36 El 17).

This illustration shows some of the material culture remains recovered in 1975. A-C, shell-tempered incised collar variety; D, shell-tempered corded collar variety; E-F, sand-tempered punctate-striate variety and toy pots.

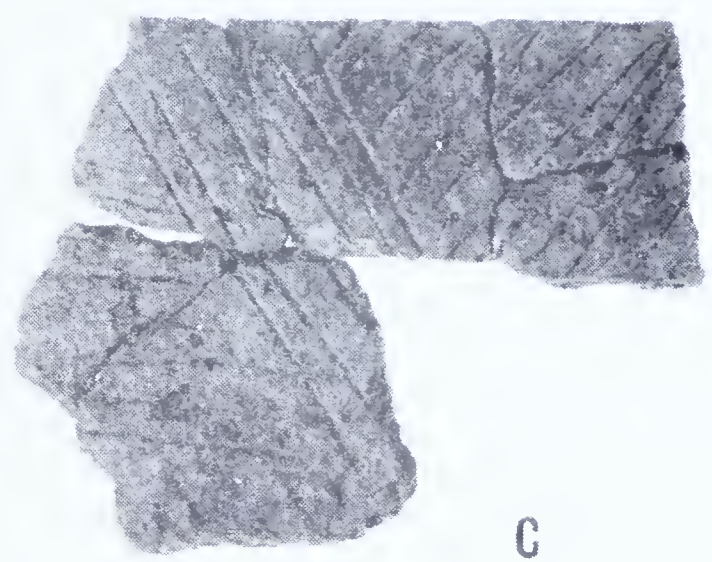




A



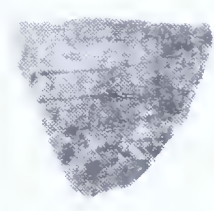
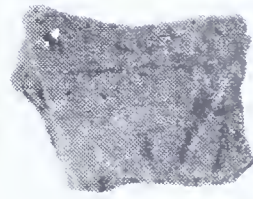
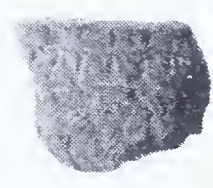
B



C



D



E



F







specimens are similar in most attributes to the incised collar variety except that the design motif occurs as an applied stamp of corded lines  $1/2$  to  $3/4$  inches long, rather than incising. Most of the collars are about two inches high with vertical cordmarking beneath the widely spaced stamped corded lines. Three examples exhibit small obliquely placed corded lines below the lip that intersect rows of horizontal corded lines. Except for the high collar, there is a strong resemblance between some of the specimens of this variety and the cord-on-cord variations that characterize the earlier Owasco period.

#### Shell-tempered Corded Variety

There are four rims in this category. The vessel shape favors a straight to slightly outflaring rim converging inward to compose the neck and then outward again to form the shoulder and elongated globular body.

In all instances, the corded and partially wiped surface is executed in a vertical fashion over the entire vessel surface. Decoration is nonexistent other than the cord embellishment on the lip surface. Two examples have plain, flat lips.

The variety is similar to the Chautauqua Cordmarked type. It has been found at the Westfield and Silverheels sites of southwestern New York and in rock shelters in the Allegheny and Clarion River Valleys of northcentral and northwestern Pennsylvania (Guthe 1958).

#### Sand-tempered Punctate-Striate Variety

There are also only four rims of this variety (Fig. 8 E-F). All are sand-tempered and exhibit punctates over a horizontally striated exterior surface. They correspond with one another in method of manufacture, temper, surface treatment, vessel configuration, and design.



The vessels appear to be small, 4 to 6 inches high and 3 to 4 inches in diameter. Punctate gashes in sharp vertical fashion were applied to one rudimentary collar forming a horizontal band of decoration around the vessel. Two other examples of this variety are decorated with a double row of round punctates over a striated rim and neck, creating "U" or "Y" shaped configurations. Lips are generally flat to slightly pointed and decorated with punctates executed in a push-pull manner parallel to the interior and exterior portions of the vessel.

The variety has no known counterpart in northwestern Pennsylvania. However, similar shell-tempered pots have been found in rock shelters in the Upper Allegheny Valley. Striking similarities in design motif are also seen when comparisons are made with the ceramics from the Montague site in southwestern Pennsylvania (Butler 1939).

### Toy Pots

Five rims representing five different pots can be recognized. They appear to be straight rimmed vessels with flat to slightly rounded lips. Body configuration is not known. Sand and shell are the tempering agents. Cordmarking is executed in a vertical or oblique fashion in much the same way as on the larger utilitarian vessels previously described in this paper. Horizontal bands of widely spaced incisions near the lip, separated by rows of punctates superimposed over a corded surface, occur on two rims. Oblique incised lines were applied over a corded surface on one example. The remaining specimen was decorated with at least two rows of evenly spaced round punctates. Mild castellation was represented on one rim which also exhibited very small lip punctations. The toy pots stylistically resemble the larger utility wares.



### Ceramic Observations

Several observations relative to the ceramic inventory can be made. Shell-tempering is characteristic of the large pots; sand-tempering is restricted to the smaller varieties. Shell-tempered wares from the McKinley Earthwork exhibit lamination and leeching which account for their acute friability. Carbonized organic material was noted on the interior surfaces of the larger utility wares. Vessel configurations, designs created by dragging a stylus of some sort over a corded or partially wiped surface, and the use of shell-temper suggest a relationship to the Late Prehistoric ceramics of southwestern New York and parts of northwestern Pennsylvania.

### Ceramic Pipes

One effigy, 1 stem, 1 elbow, and 5 bowl fragments constitute the total inventory of pipes recovered during the 1975 field season. Their shapes and designs correspond closely with the pipes previously collected from the site by Mrs. Virginia Oyler (Figs. 9-10).

The small sand-tempered effigy fragment portrays the head of a bird (Fig. 8). The beak is broken and the neck is truncated along two rows of decorative punctates. Rows of small round holes probably depict feathers, an incised line characterizes the mouth, and two large punched and twisted holes constitute the eyes.

One sand-tempered stem fragment is 2 1/2 inches long by 9/16 inches in diameter. The fragment of an elbow section of a trumpet pipe is sand-tempered and measures 1 inch by 9/16 inches. The remaining sand-tempered bowl fragments represent moderate to greatly outflaring trumpet pipes. One example is decorated with a row of vertical punctates around the lip of the bowl.





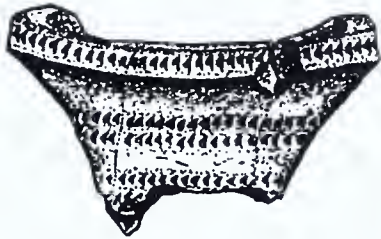
Figure 9. Ceramic Trumpet Pipes from the McKinley Earthwork  
(36 E1 17).

These specimens represent the many simple varieties of trumpet pipes found at the McKinley Earthwork by Mrs. Virginia Oyler prior to 1975. Pipes similar to D, H, and I have also been recovered from the Quiggle site, Clinton County, Pennsylvania. Pipes similar to C, D, and H are part of the ceramic inventory from the Parker site, Luzerne County, Pennsylvania. Actual size.

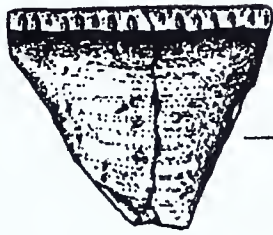
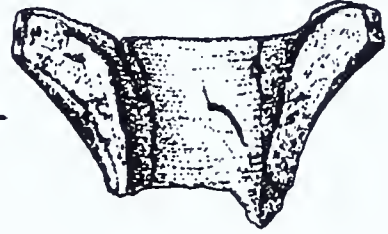




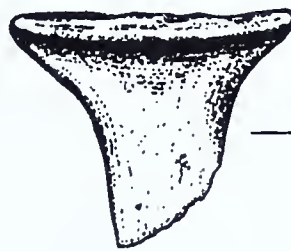
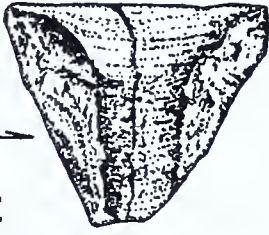
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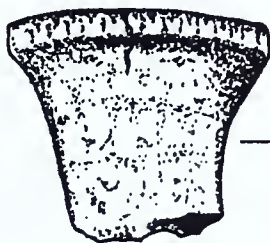
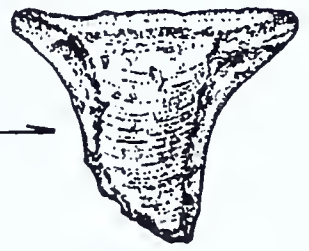
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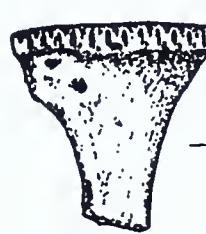
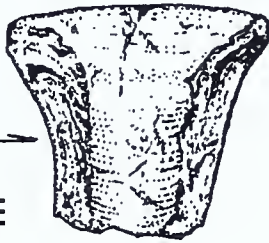
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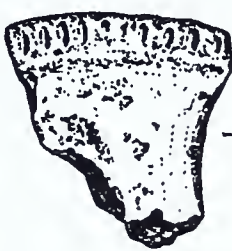
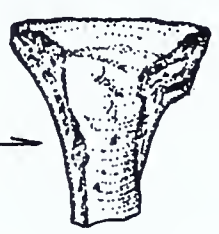
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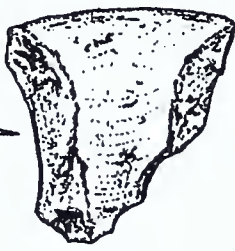
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F



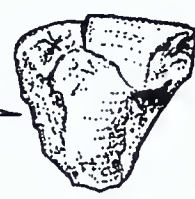
G



H



I



J



JT HERBSTRIIT





Figure 10. Ceramic Pipe Fragments from the McKinley Earthwork  
(36 El 17).

These specimens illustrate some of the elbow pipes and pipe stems found at the McKinley Earthwork by Mrs. Virginia Oyler prior to 1975. Elaborately decorated trumpet pipes and elbow sections similar to A have been recovered from the Parker site, Luzerne County, Pennsylvania. Actual size.



A



B



C



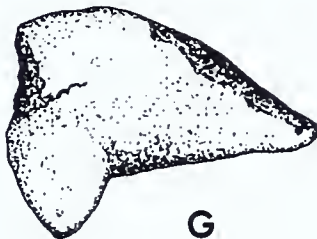
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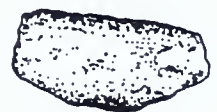
N



O



P



Q

JT HERBSTRIIT





## Lithics

The lithic artifacts recovered during the 1975 field season were separated into seven categories. These categories represent, for the most part, tools that were used for hunting, processing animal and wild plant foods, woodworking, and manufacturing other tools. Fishing and agricultural implements were not found.

### Projectile Points

One hundred and ten artifacts are assigned to this grouping (Fig. 11D). Most of the points are manufactured from pebble flint and chert that was collected from the glaciated Allegheny Plateau. There are no known or reported quarry sites in the immediate vicinity of the earthwork.

Projectile points fall into the catch all category described by Ritchie (1961: 33) as the Madison type. They average  $13/16$  to  $1\ 3/16$  inches in length and  $1/2$  to  $5/8$  inches in width. Bases are concave, straight, or very occasionally slightly convex. In most cases, the points are well made and conform to an isosceles design. Normally they were found in association with cultural features and concentrations of lithic detritus within the site.

### Knives and Related Tools

Twenty-four items are classified as bifacially chipped, trianguloid knife-like tools (Fig. 11E). They are rhomboidal in cross section and average 1 to  $1\ 1/4$  inches in linear dimension. Numerous examples retain the pebble cortex which probably accounts for their crude appearance. These tools are similar to the ones found at the Parker site and may be blanks for the manufacture of triangular projectile points or they may be specialized processing tools (Smith 1973: 17). Four drills were also found. They are generally





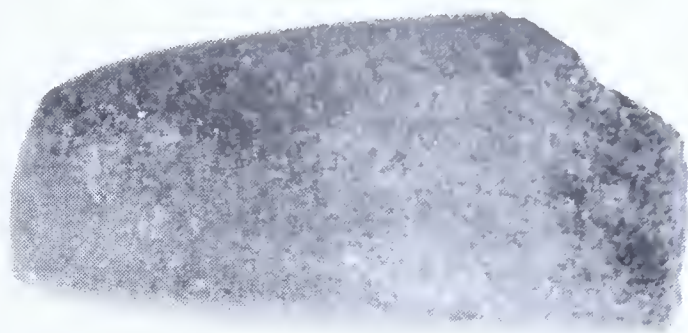


Figure 11. Lithic Artifacts from the McKinley Earthwork (36 E1 17).

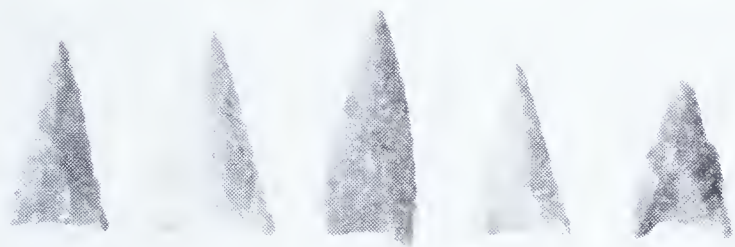
This illustration shows some of the material culture remains recovered in 1975. A, muller; B, celt; C, problematical tools; D, projectile points; E, drills and knives; F, hammerstone.



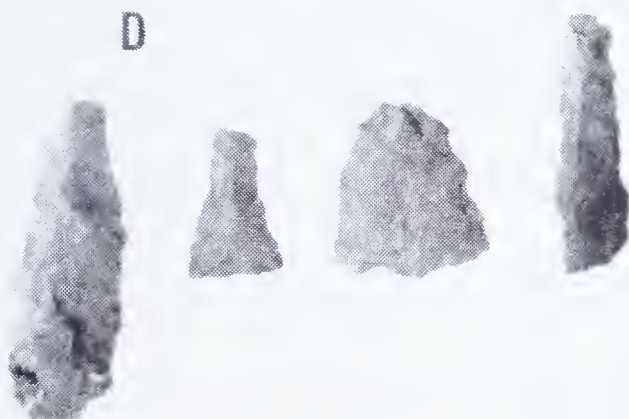
A



B



D



E



C



F



roughly chipped, rhomboidal in cross section, and measure between  $1 \frac{1}{8}$  and 2 inches in length. One example was notched for hafting onto a wooden shaft.

### Celts

Thirteen celt fragments were recovered in 1975 (Fig. 11B). Many more were previously found on the site by Mrs. Virginia Oyler. Eleven fragments exhibit pecking and subsequent polishing on at least one surface. Additional data for these remnants does not exist because of their battered and fragmented condition. Two specimens are more complete. They are  $4 \frac{1}{2}$  and  $3 \frac{3}{4}$  inches long by  $1 \frac{3}{4}$  and  $1 \frac{3}{16}$  inches wide respectively. Granite from the Allegheny Valley was the material used for these tools.

### Hammerstones

Hammerstones are of two types: spherical and elongated. The two spherical hammers are 2 and  $2 \frac{3}{8}$  inches in diameter, manufactured from granite, and exhibit multiple facets as a result of contact with the lithic source being reduced (Fig. 11F). Another hammer is elongated,  $3 \frac{3}{8}$  inches long by  $1 \frac{1}{4}$  inches thick, and is beveled on two surfaces. Also noteworthy are several nondescriptive specimens that appear to have had multiple uses.

### Milling Stones and Mullers

Nine food processing tools were recovered (Fig. 11A). They consist primarily of sandstone milling stones and mullers typical of the kind found on Late Woodland sites throughout the Northeast. Six examples are highly fragmented; therefore, only the three reasonably intact specimens are described.





One creekstone milling slab, about 8 inches in diameter and 1 5/8 inches thick, exhibits marginal battering and grinding striations in the center of one side. One sandstone muller is quite small, less than 2 1/2 inches in diameter, and shows traces of pecking around the edges. Classification of this tool may be erroneous since its use, evidenced by the pecking, may have been multifunctional and not confined to food processing. The remaining artifact is a broken granite muller measuring 4 by 2 1/4 by 1 3/4 inches. The flat surfaces show evidence of grinding and polishing.

### Anvilstones

Two anvilstones have fire-reddened surfaces. One is 3 1/2 inches square and about 1 inch thick. It is made from a fragment of sandstone that was modified along the edges. Pecking and battering is present on both flat surfaces of the stone. The other anvil, which is 5 3/4 inches long by 4 inches wide by about 2 inches thick, was found on the surface of the site. The slab has been intentionally shaped and both flat surfaces show battering.

### Problematical Tools

Two artifacts were recovered that cannot be attributed to any particular tool type (Fig. 11C). They are elongated and nearly identical in size and shape. Both tools are chipped from soft siltstone and exhibit some grinding similar to that found on celts. One example displays a polished edge while the other does not. Both may represent preliminary stages in the manufacture of small woodworking celts.





## KANE EARTHWORK (36 EL 1)

Two other three dimensional earthworks similar to the McKinley Earthwork have been investigated in Elk County. Both are situated on precipitous lobate-shaped ridges near spring or spring seep locations (Fig. 2). Invariably man's progress has left its mark on these earthworks. Wagon trails, lease roads, and oil wells scar the embankments and the interiors of each site.

In 1928, J. E. Henretta of Kane, Pennsylvania informed Miss Frances Dorrance, Director of the Wyoming Historical and Geological Society and in charge of the Pennsylvania Indian Survey, that an "Indian Fort" existed nearby on land owned by Herschel James. William A. Ritchie, Assistant Archaeologist for the Rochester Municipal Museum at that time, and Frances Dorrance inspected the site and confirmed Henretta's observations. A systematic investigation of the Kane Earthwork was begun on November 1, 1928 by Ritchie and V. J. Fewkes of the Department of Anthropology, University of Pennsylvania (Ritchie 1928).

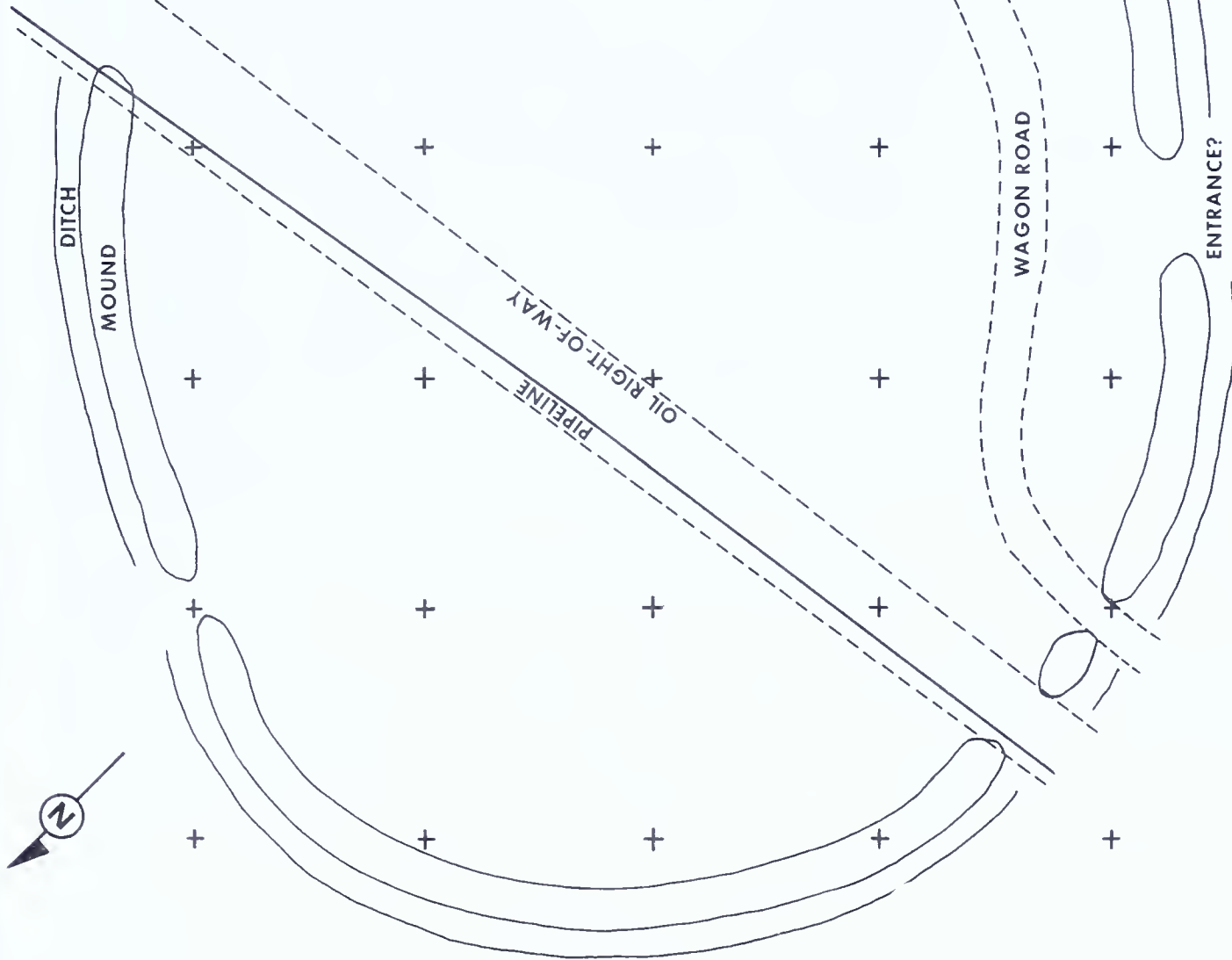
The site was surveyed into 50 foot squares and a map was prepared to illustrate the three dimensional aspects of the earthwork (Fig. 12). The three foot embankment was determined to be roughly circular, 250 feet north-south by 260 feet east-west. Immediately to the exterior, a ditch approximately 2 1/2 feet deep and 5 feet wide, circled the embankment. One hundred and eighty-nine test pits were dug within the enclosure. Only 31 of these produced cultural remains. Hearths, ash deposits, and "chipping floors" were clustered in and around the central portion of the site. Test pits dug





Figure 12. Kane Earthwork (36 El 1): Surveyed for the Pennsylvania Indian Survey by William A. Ritchie 1928.

The Kane Earthwork is more regular in form than either the McKinley or Russell City Earthworks. It also is disturbed by numerous pipe lines, wagon roads, and tree falls.



KANE  
EARTHWORK  
36 EL I

Surveyed for the  
Pennsylvania Indian Survey  
by William A. Ritchie 1928

SCALE: FEET





in the outer areas produced very scanty remains. Natural depressions served to collect flint chips, ceramic sherds, and bone. However, the bulk of the material culture that was recovered in 1928 lay within the three inch A0 humus zone.

Ritchie found no evidence of stockade posts at Kane nor any indication of occupation outside of the embankment. As was the case at McKinley, very little faunal material was recovered. This is due in part to the acidic nature of the very shallow soils on these hilltop sites.

Another smaller exploration at the Kane Earthwork was conducted in 1967 by the Kinzua Chapter of the Society for Pennsylvania Archaeology (LaBar 1968). Eleven 10 by 10 foot squares were randomly placed within the enclosure and designated by letters of the alphabet in order of their excavation. Areas of prior disturbance by the Indian Survey and by relic hunters were avoided whenever possible. The features and artifacts described in LaBar's report correspond closely with those excavated by Ritchie (Figs. 13-14).

#### RUSSELL CITY EARTHWORK (36 EL 2)

This earthwork was known at least as long ago as 1928 when Ritchie and Fewkes made surface observations to assess its status relative to the Pennsylvania Indian Survey being conducted by Frances Dorrance. There is, however, no indication of an existing artifact collection from the site prior to LaBar's study in 1967 (LaBar 1968).

A crew of volunteers under the supervision of Robert J. LaBar chain surveyed the earthwork and laid out cross trenches 170 feet north-south and 180 feet east-west (Fig. 15). A datum point was established and its location marked with reference to a well shaft which occupied a badly disturbed portion of the site.

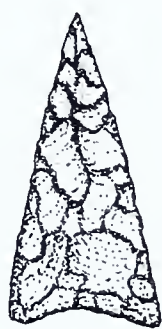






Figure 13. Triangular Projectile Points from the Kane Earthwork  
(36 El 1).

Pebble flint and chert triangular arrowpoints and knives were found at the Kane Earthwork by James T. Herbstritt and Robert J. LaBar prior to 1975. The specimens are identical to those recovered from the McKinley Earthwork. Actual size.



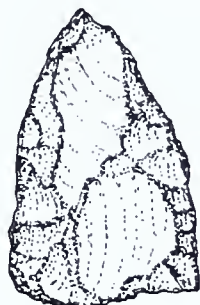
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B



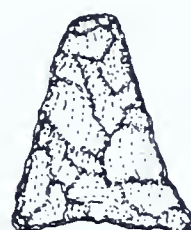
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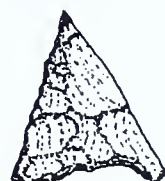
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JTherbstritt





Figure 14. Pottery Rimsherd and Celt from the Kane Earthwork  
(36 El 1).

Shell-tempered, incised collared pottery and ground stone celts similar to those found at the McKinley Earthwork were also recovered by William A. Ritchie and Robert J. LaBar at the Kane Earthwork. Actual size.

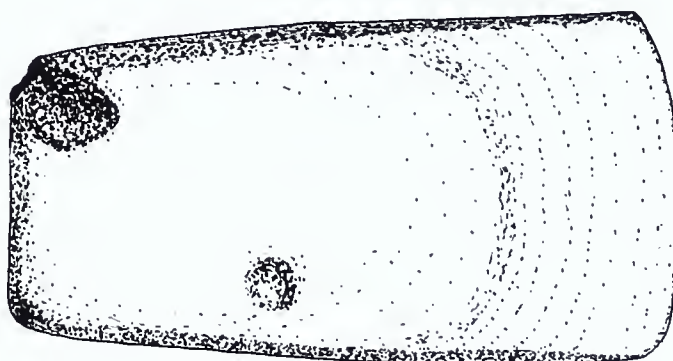
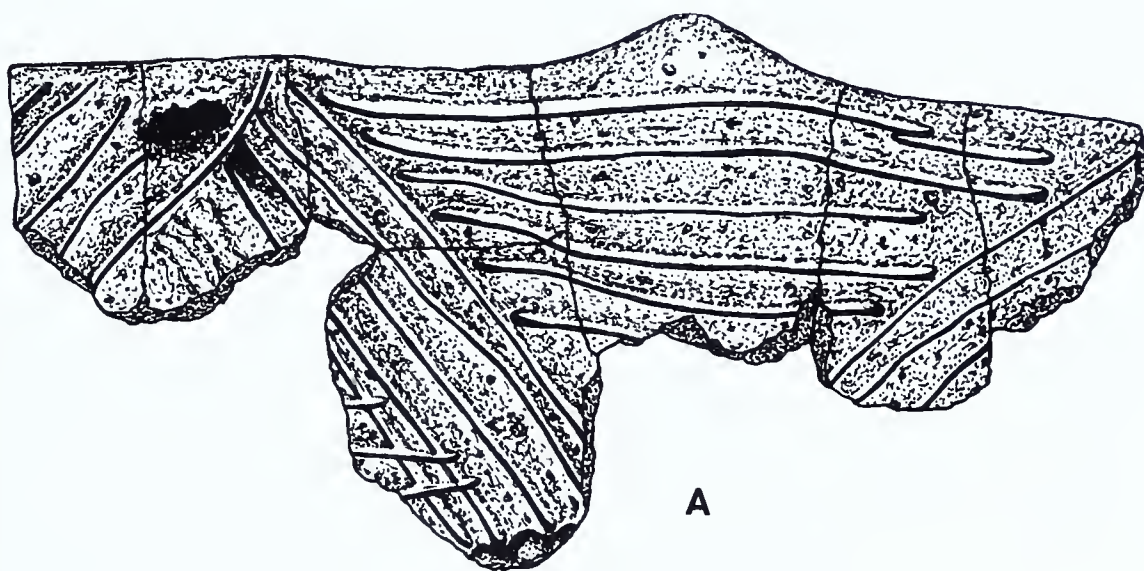
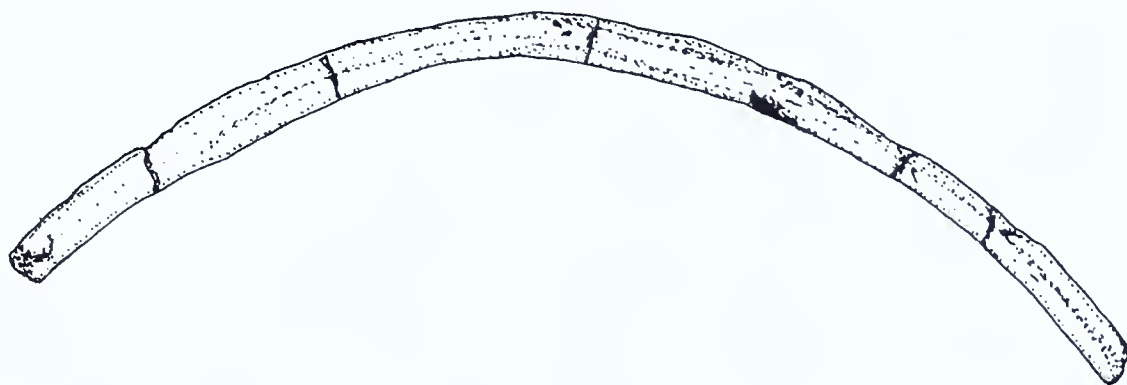


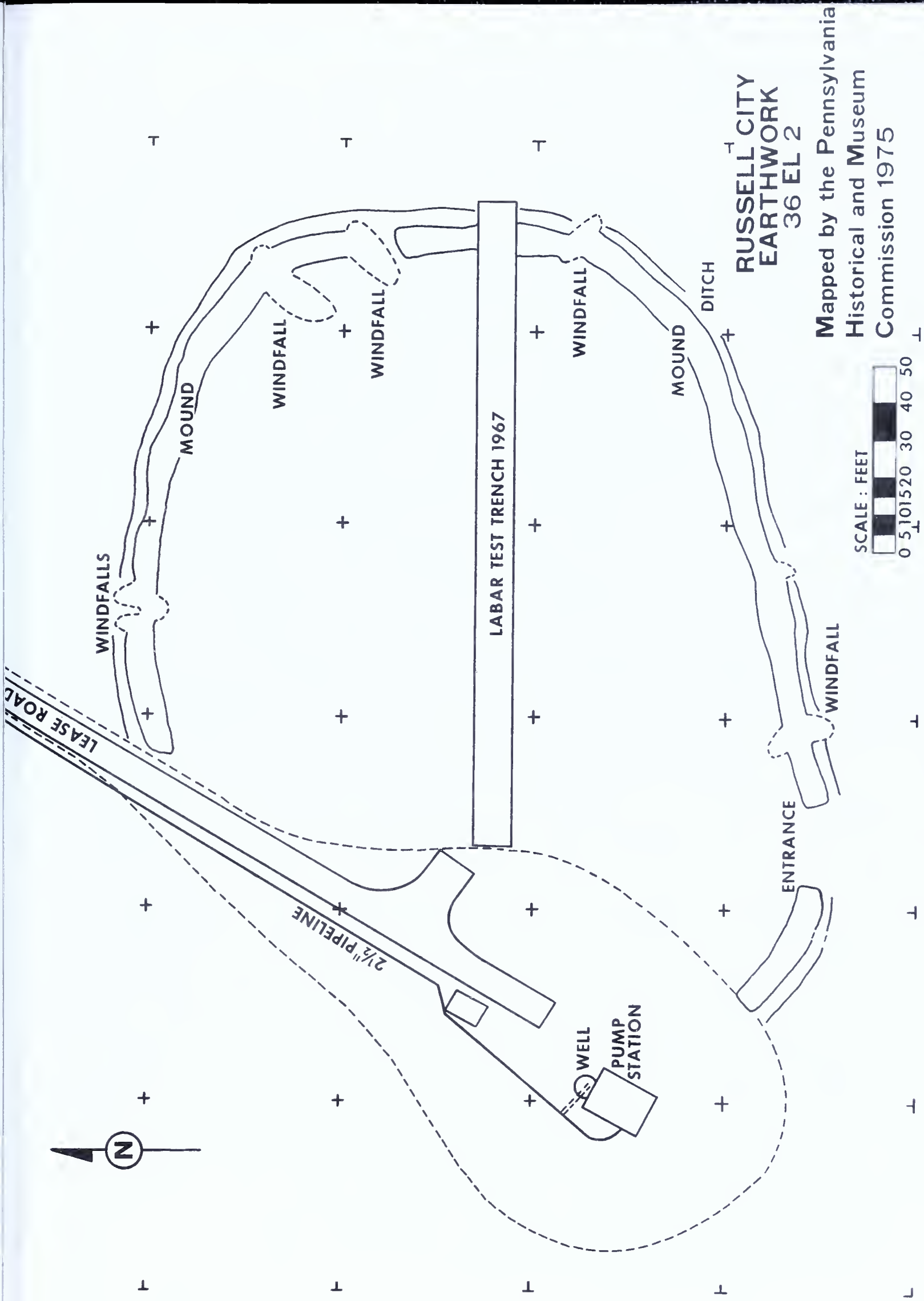






Figure 15. Russell City Earthwork (36 El 2): Mapped by the Pennsylvania Historical and Museum Commission 1975.

This earthwork is smaller than the other two earthworks and is considerably disturbed by welling operations along the western perimeter. LaBar's east-west test trench is shown through the center of the village.



**RUSSELL CITY  
EARTHWORK  
36 EL 2**

Mapped by the Pennsylvania  
Historical and Museum  
Commission 1975





Thirty-five 10 by 10 foot squares were located within these trenches, although not all of the squares were excavated. The features that were discovered were shallow basins and irregular refuse pits much like the ones found at Kane and McKinley. LaBar and his associates using a probing device located what appeared to be several arcs of postmolds, one near the center of the earthwork and another closer to the embankment. LaBar contents that they could represent the walls of circular or oval-shaped house patterns. The material culture consisted of chippage, shell-tempered ceramic sherds, triangular projectile points, and a few ground stone tools (Figs. 16-17).

Ritchie refers to the site as being roughly oval-shaped, 135 feet north-south by 160 feet east-west. LaBar's map and our own survey map made in 1975 indicate comparatively greater dimensions -- approximately 180 feet by 225 feet. This suggests that Ritchie's measurements are grossly inaccurate or that the site he investigated is not the site that is known today as the Russell City Earthwork. Future research in the area may resolve this issue.

#### DISCUSSION

Earthworks are not unique to Elk County, Pennsylvania. In fact, references to these kinds of archaeological sites in nearby areas occur frequently in the 19th and early 20th century literature. Examining some of the New York State sources (Squire 1851, Parker 1922, Guthe 1958), we discover a marked concentration of earthcircles, walls, and ditches extending from St. Lawrence County in the north to Chautauqua County in the south (Fig. 18). Fifteen earthworks in the vicinity of Watertown, Jefferson County, New York represent the greatest concentration. The largest earthcircle enclosed nearly 16 acres and was located west of the finger lakes near Livonia in Livingston County.

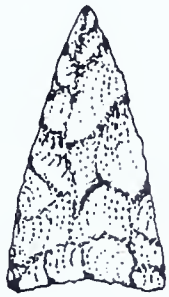




Figure 16. Pottery Rimsherds and Stone Projectile Points from the Russell City Earthwork (36 El 2).

Shell-tempered, incised collared pottery and pebble flint triangular projectile points like those from the McKinley and Kane Earthworks were recovered during LaBar's excavations at Russell City in 1967. Actual size.





A



B



C



D



E



F



G



H



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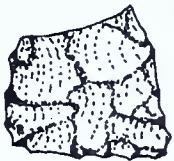
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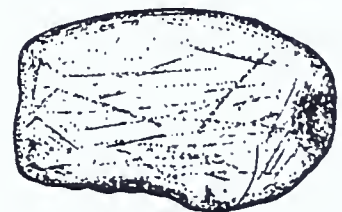
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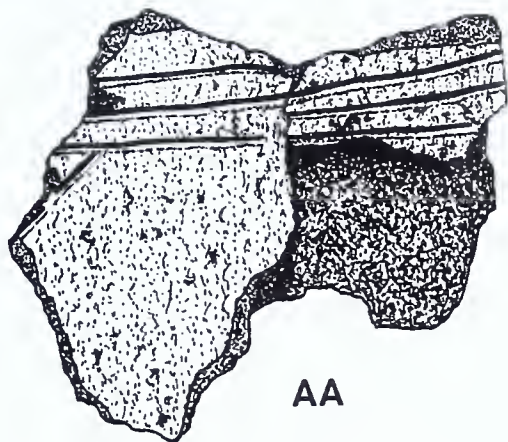
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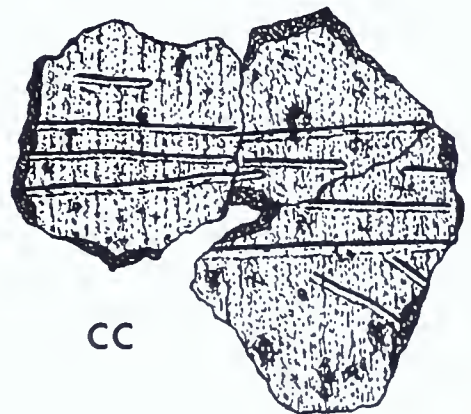
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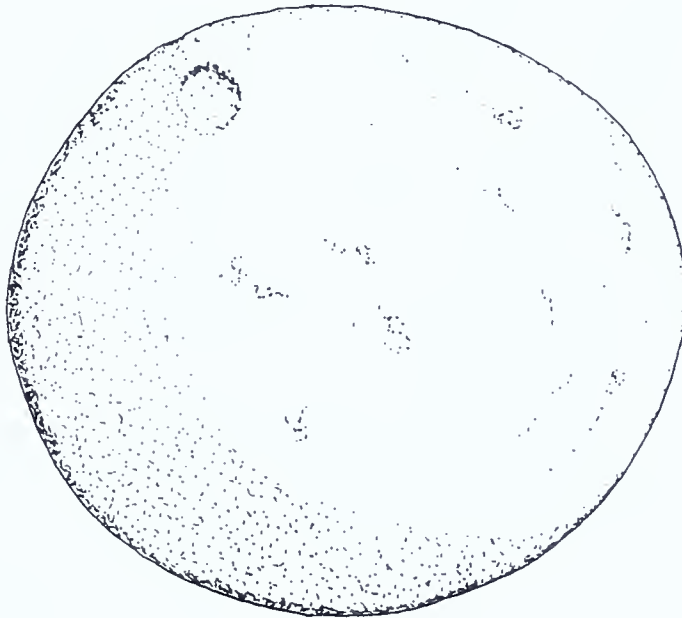
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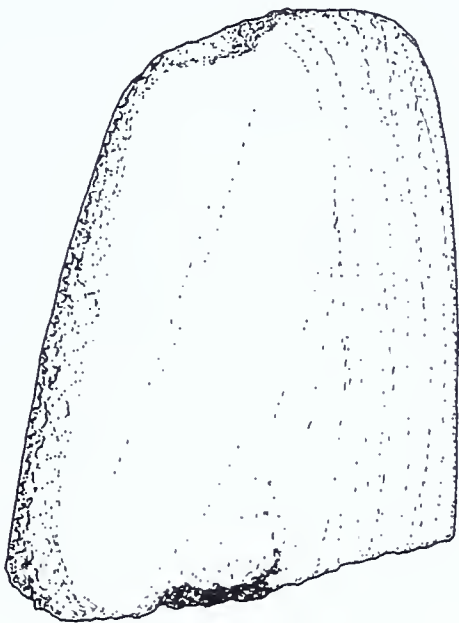


Figure 17. Ground Stone Tools from the Russell City Earthwork  
(36 El 2).

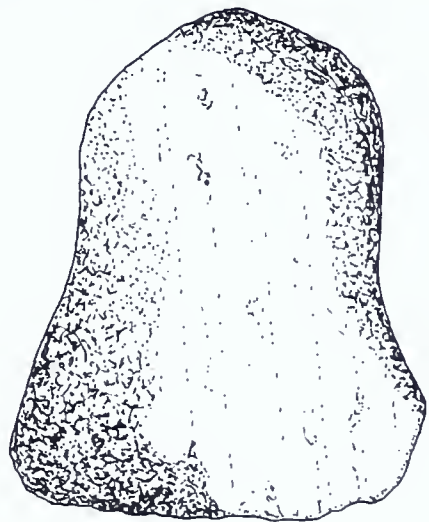
Celt pole, hammerstones, and miscellaneous ground stone tools were recovered during LaBar's excavations at Russell City in 1967. Actual size.



A



B



C





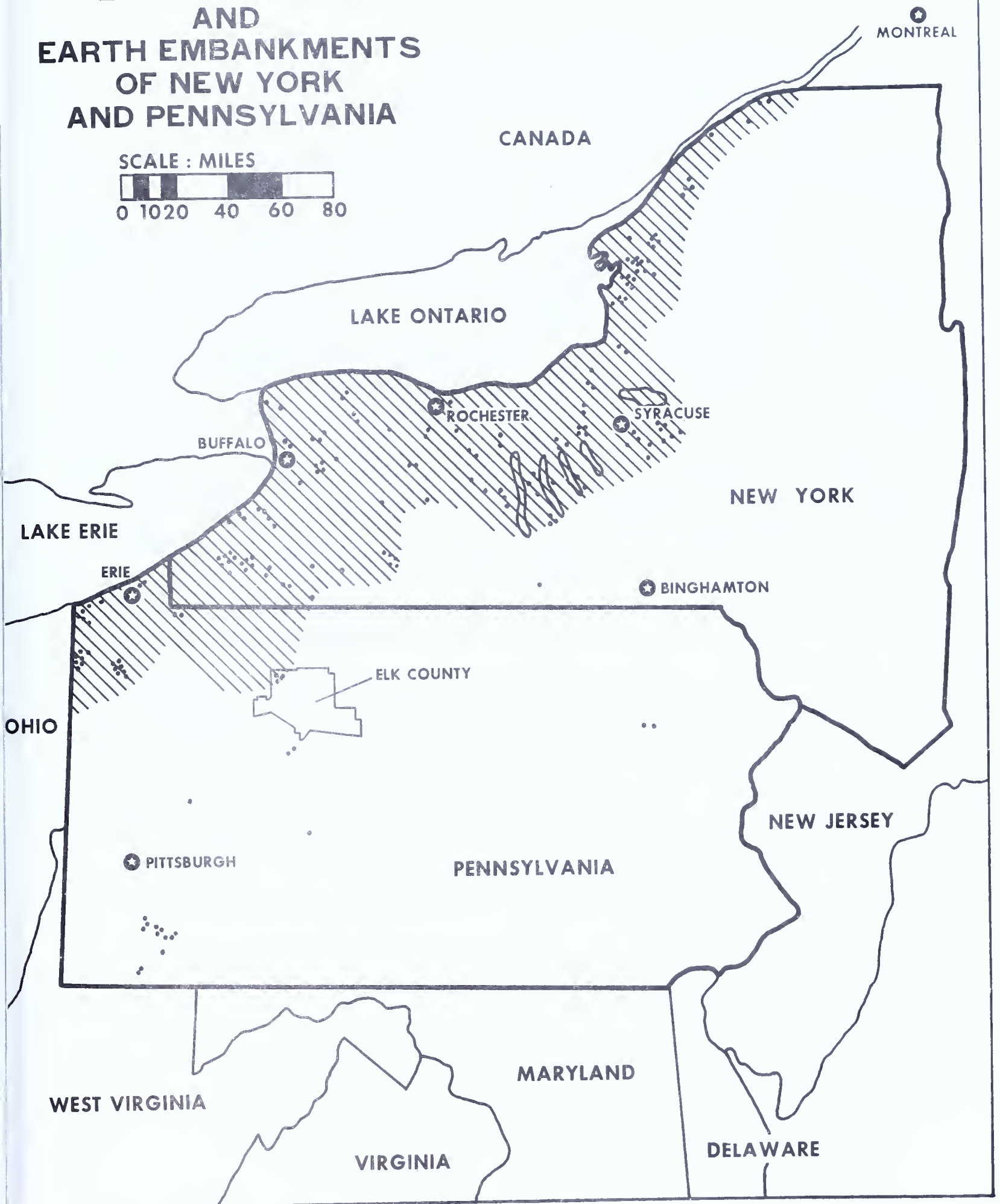
Figure 18. Earthcircles and Earth Embankments of New York and Pennsylvania.

Clusters of earthworks are shown from St. Lawrence County in northern New York, south along Lake Ontario and Lake Erie, and into Crawford County, Pennsylvania. The dots southeast of Pittsburgh represent the Westmoreland-Fayette-Somerset cluster; those in the far east of the state are within the Wyoming Valley.



# EARTH CIRCLES AND EARTH EMBANKMENTS OF NEW YORK AND PENNSYLVANIA

SCALE : MILES





Some caution should be exercised when using Fig. 18. Each dot on the map represents the approximate location of a site reported in the literature as either an earthcircle, earthwork, embankment, earthwall, or ditch. In other words, these are sites which when they were recorded were still visible above ground. Burial mounds are not included. Additionally, no attempt is made to suggest that these earthworks are culturally or temporally related in any way to those in Elk County or for that matter to each other. The fact is that various cultural groups and time periods are represented by these sites.

Squire was able to ascertain the locations of nearly 100 earthworks through the use of early documentary accounts and field survey and estimated that from 200 to 250 must have originally existed in New York State (Squire 1851: 11). Certain of Squire's observations are presented below to provide the reader with a general impression of some of the similarities and dissimilarities among these structures.

"I have found that the works which were esteemed entirely regular are the very reverse, and that the builders, instead of constructing them upon geometrical principles, regulated their forms entirely by the nature of the ground upon which they were built" (Squire 1851: 9).

"Most occupy high and commanding sites near the bluff edges of the broad terraces by which the country rises from the level of the lakes...When found upon lower grounds, (they are) usually upon some dry knoll or little hill,...In nearly all cases they are placed in close proximity to some unfailing supply of water,..." (Squire 1851: 12).

"The first feature which attracts notice, upon entering them (the enclosures), is a number of pits or excavations in the earth,...They are usually from three to four, but sometimes from six to eight feet in depth, and of proportionate size at the top...They were caches in which the former occupants of these works deposited their stores. Parched corn, now completely carbonized by long exposure, is to be discovered in considerable abundance in many of them...Traces of bark and thin slips of wood, by which the deposits were surrounded, are also frequently found" (Squire 1851: 12).



"In many of these inclosures the sites of the ancient lodges, or cabins, are still to be traced. They are marked by considerable accumulations of decomposed and carbonaceous matter -- stones much burned, charcoal and ashes mingled with the bones of animals,..." (Squire 1851: 13).

The same high density of earthworks continues into Erie and Crawford Counties in northwestern Pennsylvania where more than 22 sites are recorded in the early literature. Earthworks are also mentioned in other county histories throughout western Pennsylvania and the Upper Ohio Valley. One clustering is centralized in the Westmoreland-Fayette-Somerset County area if general references in early accounts have any validity. Boucher (1906: 72), referring to the Indians of Westmoreland County, relates that "they had rude fortifications around their towns made by digging trenches and surmounting the ground thrown from them by logs, stones, bark, etc."

Another historian writing about the works and relics of an extinct people in Fayette County relates that "evidences are found chiefly in curious mounds and other forms of earthwork,..." (Ellis 1882: 16). Many of these latter sites and their locations are described.

"These remains of embankments of 'old forts' are numerous in Fayette County...These embankments may have been originally composed of wood, as their debris is generally a vegetable mound. No stones were used in their construction, and among their ruins are always found some remains of old pottery, composed of clay mixed with crushed mussel-shells, even when far off from a river...These 'old forts' were of various forms -- square, oblong, triangular, circular, and semicircular. Their superficial areas ranged from one-fourth of an acre to ten acres" (Ellis 1882: 17).

Earthworks are also reported just south of the Allegheny National Forest in Clearfield and Cambria Counties. A description of two of these sites located in the northwest corner of Clearfield County was given to Herman S. MacMinn of DuBois, Pennsylvania by C. E. Washburn in a letter dated May 16, 1916.





"Regarding inquiry concerning the old 'Indian Fort' located on the lands of William Bundy, 'Hickory Kingdom', my attention was called to this place in 1863 when I was clearing the land. I found a circular outline of what appeared to have been an old Indian fort. The embankment was at that time about 12 or 15 inches in height and about 250 feet in diameter...When I plowed this land I found ashes in abundance, also charcoal in several places within this circle which seemed to be about eight or ten inches under the soil, also quite a number of arrowheads and other curious stones of different shapes..." (MacMinn 1916: 1).

"Now the other one (of the forts) on the Wm. Long place was about 200 feet in diameter with an embankment which was traceable but not so high as the first one mentioned. The height of this one was from 6 to 10" and more uniform than the other. Inside of this circle we also found ashes and charcoal, arrowheads and curious stones, also pottery, but not so abundant as in the first one" (MacMinn 1916: 1-2).

Seven years prior to the Washburn correspondence, MacMinn examined and described the first of the earthworks as being "plainly discerned from the top of a hill, three thousand feet to the eastward, in the very dark color of the earth in contrast with the yellower soil surrounding this circle or the whole location" (MacMinn 1916: 2). The Bundy site (36 Cd 1) is situated in the approximate vicinity described for this earthwork and exhibits from the air today a clearly defined dark zone surrounded by lighter yellow soil. Material cultural, in particular shell-tempered pottery similar to that from the Elk County earthworks, has been found within the discolored area.

In eastern Pennsylvania and in much of eastern New York State, references to earthworks in the early literature are, with one exception, conspicuous by their absence. That exception is in the Wyoming Valley near Wilkes-Barre, Luzerne County, Pennsylvania. The Wyoming Valley is a geological anomaly ringed by precipitous rock ledges and high topographic features. It





encompasses almost 17 miles of the North Branch of the Susquehanna River and was homeland for a group of Late Prehistoric people commonly referred to as the Wyoming Valley Culture (Smith 1973).

Two earthworks in this valley are described by several early 19th century writers (Chapman 1830, Miner 1845). Miner's (1845: 25-26) coordinates for locating the earthwork on Jacob's Flats correspond closely to the location of the late 15th-early 16th century Parker site excavated by the senior author in 1968 (Smith 1973: 45). Investigations showed that this site was a large permanent settlement surrounded by a complex stockade composed of five parallel lines of posts and an external ditch.

Most earthworks in northwestern Pennsylvania and western New York State are located in the lowlands and on the drumlins of the Central Lowland Physiographic Province, and on the escarpment adjoining the more rugged Appalachian Plateau Province. The remaining earthworks in Pennsylvania are confined to the Appalachian Plateau Province.

The locations of earthworks seem to correlate with physical terrain that would have proved to be less than desirable for agricultural production in the late 19th and early 20th centuries. Earthworks are prevalent in western Pennsylvania partly because they survived agricultural incursions longer than in the eastern part of the state. More important, however, their locations correspond closely with culture areas where archaeologists consistently find subsurface evidence for Late Prehistoric stockaded villages with internal or external ditches. Earthworks are simply the visible remains of villages that were once surrounded by log and earth fortifications. Most of the above ground vestiges are now destroyed. Today, only the bottoms of the postmolds and ditches that are preserved beneath the plowzone are discovered by the



archaeologist. This appears to be the case for the Wyoming Valley sites, the Monongahela sites in southwestern Pennsylvania, and many of the proto-Iroquoian and Iroquoian sites in northwestern Pennsylvania and western New York.

The incised collared, shell-tempered pottery from the Elk County earthworks has numerous stylistic parallels across northern Pennsylvania and in southwestern New York. It is entirely distinctive from the cordmarked, shell-tempered Monongahela pottery found in the stockaded towns of southwestern Pennsylvania; it is similar to, but in many subtle ways different from, the incised collared, shell-tempered early Shultz-Susquehannock pottery in eastern Pennsylvania.

McFate Incised is a shell-tempered, incised collared pottery that is commonly found in Crawford County and parts of northwestern Pennsylvania (Mayer-Oakes 1955: 204). Its design consists of horizontal and oblique line combinations like the pottery from Elk County. McFate Incised, or its regional equivalent, occurs at one of the Ellington Earthworks (Guthe 1958: 46, 93), along with lesser amounts of shell-tempered cordmarked pottery, and at the Old Nut site, both in Chautauqua County, New York. North of Chautauqua County the pottery of the Niagara Frontier Iroquois is predominantly grit-tempered (White 1961: 91). The Late Prehistoric pottery to the east of Chautauqua County is also grit-tempered, although a small amount of shell-tempered cordmarked and incised collared pottery is reported as far into Seneca Country as the Genesee Valley (Johnson 1975: personal communication).

Shell-tempered pottery with many characteristics in common with the pottery from the Elk County earthworks is found in Pennsylvania at small sites throughout Elk County and in the West Branch Susquehanna River Valley at the



Quiggle site, excavated by the senior author in 1971 (Smith 1972), and at one other large site, 36 Cn 23. The pottery of the Wyoming Valley Culture is primarily grit-tempered and much like the Garoga and Chance types of New York. However, about 1 in 10 sherds is shell-tempered with incised collars that display motifs of both the shell-tempered pottery at the McKinley Earthwork and the early Shultz-Susquehannock pottery in the remainder of the Susquehanna Valley (Smith 1970).

There are many cultural traits that the Elk County earthworks share with the other Pennsylvania sites that produce similar pottery types. Stockade lines and internal or external ditches characterize the McFate type site in Crawford County, the Quiggle site, and the Wyoming Valley sites. Trumpet pipes and pebble flint triangular projectile points also occur at the Quiggle and Parker sites. There are more similarities, but none more significant than the pottery or the settlement pattern, that suggest that the Elk County earthworks rest in the heartland of a large Late Prehistoric sphere of cultural influence. This sphere includes northwestern Pennsylvania and southwestern New York, and extends as far as the Genesee Valley in New York and the Wyoming Valley in eastern Pennsylvania.

Cultural traits similar to those at the Quiggle and Parker sites suggest that the Elk County earthworks date to the latter half of the 15th century or the first part of the 16th century A.D. The material culture recently recovered further suggests that these earthworks are seasonal in nature and have a relatively short longevity.



## RECOMMENDATIONS

Recommendations pertaining to the prehistoric earthworks located in the Elk County portion of the Allegheny National Forest fall into three classifications: additional research, short term protection, and long term preservation.

It is clear from the recent archaeological excavations and mapping efforts of the known earthworks that there are many questions that still require answers. The exploratory work on the least disturbed and for that reason perhaps the more important McKinley Earthwork represents a significant step forward in the effort to better understand the mechanics of a single structure. Basic site definition has been established at McKinley, but more research is necessary. Larger areas of the site must be explored; techniques for more clearly delineating postmolds and thereby defining house patterns and other internal structures must be discovered and tested; material culture remains must be carefully collected and recorded to define intra-site activity areas and any temporal differences that may exist between those areas; and external village perimeters must be investigated to determine if special purpose structures like those found at the Quiggle site are present (Smith 1974, 1975). Only McKinley should be intensely excavated; the others could be selectively explored but preserved reasonably intact. The clear understanding of a single site will help in interpreting other similar nearby sites. However, the functional, seasonal, temporal, and/or social relationships between the various earthworks should be explored.

Kane, McKinley, and Russell City earthworks have already suffered serious damage caused by natural deterioration, timbering, the opening of the northwest







oil fields, and vandalism. It is clearly unlawful to destroy or remove natural or man-made objects from lands under federal jurisdiction. All site areas should be clearly posted -- not the exact parameters of the site, but a considerably larger area -- indicating that within the posted area are significant archaeological remains which if disturbed in any way will result in fines and/or imprisonment. This should be enforced and the sites periodically patrolled.

The United States Department of Agriculture Forest Service should prepare or have prepared and submit the necessary nomination forms so that all three sites might be considered for status on the National Register of Historic Places as provided for under the National Historic Preservation Act of 1966. There was a time when many prehistoric stockaded villages in Pennsylvania exhibited embankments and entrenchments, but only a very few have survived the ravages of time and destruction by farming. Admittedly, the Elk County sites are not unique in the sense of Late Prehistoric stockaded villages. They are unique in that they are about the last of the stockaded villages in Pennsylvania where vestiges of the stockade-embankment complex are still visible above ground. For this reason, they should be permanently preserved.



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## APPENDIX A

### STANDARD FORMS FOR RECORDING ARCHAEOLOGICAL DATA



SECTION OF ARCHAEOLOGY  
WILLIAM PENN MEMORIAL MUSEUM

Site \_\_\_\_\_

Square \_\_\_\_\_

Date \_\_\_\_\_

Level \_\_\_\_\_

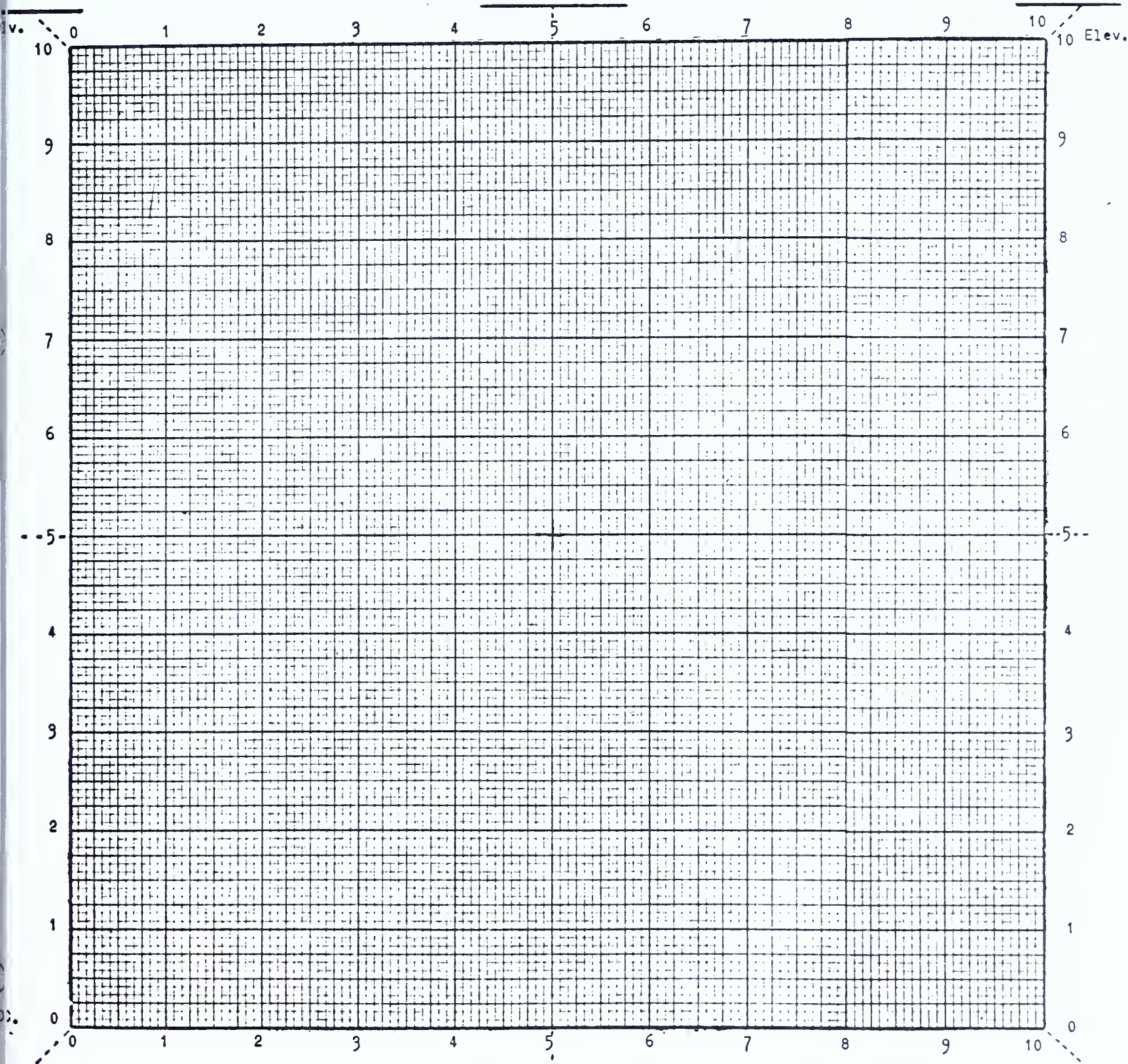
Observer \_\_\_\_\_

Depth \_\_\_\_\_

Nature of the floor \_\_\_\_\_

Nature of the level \_\_\_\_\_

Refer to profile drawing No. \_\_\_\_\_





ARCHAEOLOGICAL FEATURE RECORD

1. Feature No. \_\_\_\_\_ 2. Site \_\_\_\_\_
3. Depth from surface \_\_\_\_\_ 4. Depth from plowline \_\_\_\_\_
5. Excavation unit (square or Tr. No.) \_\_\_\_\_
6. Horizontal location \_\_\_\_\_ ft. \_\_\_\_\_ in. of stake No. \_\_\_\_\_  
\_\_\_\_\_ ft. \_\_\_\_\_ in. of stake No. \_\_\_\_\_
7. Definition \_\_\_\_\_  
\_\_\_\_\_  
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8. Associated objects and features \_\_\_\_\_  
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9. Dimensions \_\_\_\_\_
10. Stratigraphic notes \_\_\_\_\_  
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12. Exposed by \_\_\_\_\_ 13. Reported by \_\_\_\_\_
14. Date \_\_\_\_\_ 15. Photo \_\_\_\_\_ 16. Sketch \_\_\_\_\_



C14 SAMPLE RECORD

\_\_\_\_\_  
(Site)

SAMPLE FIELD NUMBER \_\_\_\_\_

COLLECTOR \_\_\_\_\_ DATE \_\_\_\_\_

PROVENIENCE:

Square \_\_\_\_\_

Feature Association: Number \_\_\_\_\_ Interpretation \_\_\_\_\_  
Location within Feature (zone and measurement) \_\_\_\_\_

Artifact Association: (Be specific as to type and position) \_\_\_\_\_

THE SAMPLE:

Material Collected: Identification \_\_\_\_\_  
Amount \_\_\_\_\_ Texture (fine, medium, coarse, etc.) \_\_\_\_\_

Collection Technique: \_\_\_\_\_

Possible Sources of Contamination: (water, chemical, plant, animal, etc.) \_\_\_\_\_

LABORATORY ANALYSIS:











## ARCHAEOLOGICAL PHOTOGRAPHIC RECORD

Site \_\_\_\_\_ General Subject \_\_\_\_\_

Photographer (s) \_\_\_\_\_

Date \_\_\_\_\_

Camera \_\_\_\_\_ Film \_\_\_\_\_ ASA \_\_\_\_\_

Extra equipment (lens, filter) \_\_\_\_\_

Roll or Pack #	Exp. #	Speed	F-Step	Subject	Neg. #
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## APPENDIX B

### TABULATION OF CERAMIC AND LITHIC ARTIFACT TYPES



## MCKINLEY EARTHWORK 1975: CERAMIC ARTIFACTS

	McKinley	Total	Kane	Russell City
Shell-tempered Incised Collar Variety				
Collar rims	22(1)		X	
Collar mid and lower sections	64		X	X
Toy pot collars	4			
Total		91		
Shell-tempered Corded Collar Variety				
Collar rims	10			
Collar mid and lower sections	7			
Total		17		
Shell-tempered Corded Variety				
Rims	4		X	X
Toy pots	1			
Total		5		
Shell-tempered Bodysherds				
Cordmarked	553		X	X
Plain	153		X	X
Unidentifiable	415		X	X
Total		1121		
Sand-tempered Punctate-Striate Variety				
Rims	4			
Bodysherds	3			
Total		7		
Sand-tempered Pipes				
Effigy (fragment)	1			
Stem (fragment)	1		X	X
Elbow, trumpet (fragment)	1			
Trumpet bowls (fragment)	5			
Total		8		





## MCKINLEY EARTHWORK 1975: LITHIC ARTIFACTS

	McKinley	Total	Kane	Russell City
<hr/>				
Triangular Projectile Points				
Concave base (complete and broken)	62		X	X
Straight base (complete and broken)	37		X	X
Slightly convex base (complete and broken)	11		X	X
Tips	37		X	X
Total		147		
Knives and Related Tools				
Total		24	X	X
Drills				
Drills (complete and broken)	4		X	X
Tips	2		X	X
Total		6		
Celts				
Total		13	X	
Hammerstones				
Elongated	1			X
Spherical	2			
Total		3		
Milling Stones and Mullers				
Total		9		X
Anvilstones				
Total		2		
Problematical				
Total		2		



APPENDIX C

ARTIFACT CATALOGUE AND INVENTORY



## ARTIFACT CATALOGUE

Page 1McKinley (36 E1 17)  
(site)COLLECTOR William Penn Memorial Mus. YEAR 1975 ACCESSION 75.120

Catalogue Number	Square	Provenience Feature	Artifact Inventory
E1 17/1	S120W100	A0 zone	6 chips
E1 17/2	S110W100	A0 zone	80 chips, 3 points, 4 sherds
E1 17/3	S110W90	A0 zone	102 chips, 1 point, 1 sherd
E1 17/4	S110W80	A0 zone	6 chips
E1 17/5	S100W80	A0 zone	21 chips, 1 point
E1 17/6	S110W70	A0 zone	9 chips, 2 ground stone objects
E1 17/7	S100W70	A0 zone	22 chips, 2 sherds (1 shell, 1 grit-temp), 1 celt, 1 hammerstone.
E1 17/8	S110W60	A0 zone	7 chips
E1 17/9	S100W60	A0 zone	26 chips, 1 sherd
E1 17/10	S110W50	A0 zone	3 sherds
E1 17/11	S100W50	A0 zone	132 chips, 3 points, 36 sherds
E1 17/12	S100W40	A0 zone	78 chips, 2 sherds
E1 17/13	S110W30	A0 zone	2 chips
E1 17/14	S100W30	A0 zone	38 chips
E1 17/15	S110W20	A0 zone	7 chips, 1 sherd



## ARTIFACT CATALOGUE

Page 2

McKinley (36 E1 17)  
(site)

COLLECTOR William Penn Memorial Mus. YEAR 1975 ACCESSION 75.120

Catalogue Number	Square	Provenience Feature	Artifact Inventory
E1 17/16	S100W20	A0 zone	2 calcined bones, charred food. 309 chips, 7 points, 52 sherds, 1 pipe.
E1 17/17	S100W20	Feat. 16	94 chips, 6 points, 9 sherds
E1 17/18	S90W20	A0 zone	1 pipe, 36 sherds, 3 bone frag. 221 chips, 3 points, 2 chipped stones.
E1 17/19	S100W10	A0 zone	8 sherds. 68 chips, 2 points, 1 chipped stone,
E1 17/20	S90W10	A0 zone	38 chips, 1 pipe, 11 sherds
E1 17/21	S80W10	A0 zone	9 chips, 1 point, 16 sherds
E1 17/22	S70W10	A0 zone	26 chips, 1 point
E1 17/23	S60W10	A0 zone	40 sherds, calcined bone. 112 chips, 3 points, 2 chipped stones.
E1 17/24	S50W10	A0 zone	44 chips, 14 sherds
E1 17/25	S40W10	A0 zone	47 chips, 8 sherds
E1 17/26	S30W10 (3' x 10')	A0 zone	165 chips, 1 point, 8 sherds
E1 17/27	S20W10 (3' x 10')	A0 zone	692 chips, 9 points, 26 sherds
E1 17/28	S10W10 (3' x 10')	A0 zone	195 chips, 1 point, 4 sherds
E1 17/29	S110E0	A0 zone	3 chips, 3 sherds
E1 17/30	S100E0	A0 zone	21 chips, 1 sherd, 1 pipe effigy





McKinley (36 E1 17)  
(site)COLLECTOR William Penn Memorial Museum YEAR 1975 ACCESSION 75.120

Catalogue Number	Provenience Square Feature	Artifact Inventory
E1 17/31	S90E0 A0 zone	calcined bone 48 chips, 2 points, 69 sherds,
E1 17/32	S90E0 Feat. 15	88 chips, 91 sherds, 2 points, bone
E1 17/33	S80E0 A0 zone	1 charred food stuff 41 chips, 1 ground stone, 35 sherds,
E1 17/34	S70E0 A0 zone	12 chips, 3 sherds
E1 17/35	S60E0 A0 zone	57 chips, 3 points, 15 sherds, 1 bone
E1 17/36	S50E0 A0 zone	1 ground stone 58 chips, 1 point, 29 sherds, 2 bones.
E1 17/37	S40E0 A0 zone	9 chips, 1 point, 9 sherds
E1 17/38	S30E0 A0 zone	44 chips, 3 points, 1 sherd, bone
E1 17/39	S100E20 A0 zone	3 chips, 1 sherd
E1 17/40	S90E20 A0 zone	10 chips, 1 sherd
E1 17/41	S80E40 A0 zone	208 chips, 3 points, 1 pipe, 4 sherds
E1 17/42	S70E60 A0 zone	19 chips, 2 points, 10 sherds
E1 17/43	N0E0 A0 zone	1 hammerstone, 8 sherds. 71 chips, 1 point, 1 chipped stone,
E1 17/44	N10E0 A0 zone	calcined bones 42 chips, 1 point, 13 sherds, 2
E1 17/45	N20E0 A0 zone	7 chips, 1 point



McKinley (36 E1 17)  
(sire)

COLLECTOR William Penn Memorial Museum YEAR 1975 ACCESSION 75.120

Catalogue Number	Square	Provenience Feature	Artifact Inventory
E1 17/46	N30E0	A0 zone	16 chips
E1 17/47	N40E0	A0 zone	12 chips, 1 sherd
E1 17/48	N50E0	A0 zone	bone. 65 chips, 1 point, 2 sherds, calcined
E1 17/49	N60E0	A0 zone	40 chips, 1 chipped stone, 6 sherds
E1 17/50	N70E0	A0 zone	calcined bone 72 chips, 4 points, 14 sherds,
E1 17/51	N80E0	A0 zone	44 chips, 2 points, 19 sherds
E1 17/52	N90E0	A0 zone	7 chips, 1 point
E1 17/53	N100E0	A0 zone	iron nails
E1 17/54	N110E0	A0 zone	iron nails
E1 17/55	N70E0	Feat. 4	celt fragment. 104 chips, 2 points, 27 sherds, 1
E1 17/56	N60E50	A0 zone	3 chips
E1 17/57	N110E50	A0 zone	1 point
E1 17/58	N70E105	A0 zone	2 chips
E1 17/59	N80E105	A0 zone	1 chip
E1 17/60	S10W10 (7'x10')	A 0 zone	517 chips, 9 points, 16 sherds, 3 chipped stones, 1 celt, 2 misc. groun stones, charred food, bone.



McKinley (36 E1 17)  
(site)

COLLECTOR William Penn Memorial Mus. YEAR 1975 ACCESSION 75.120

Catalogue Number	Square	Provenience Feature	Artifact Inventory
E1 17/61	S20W10 (7'x10')	A0 zone	chipped stone 872 chips, 11 points, 70 sherds, 1
E1 17/62	S30W10 (7' x 10')	A0 zone	290 chips, 3 points, 18 sherds
E1 17/63	S10W20 (10' x 10')	A0 zone	charred food. 671 chips, 8 points, 20 sherds,
E1 17/64	S20W20 (10' x 10')	A0 zone	1684 chips, 21 points, 31 sherds, celt bit, bone, charred food.
E1 17/65	S30W20 (10' x 10')	A0 zone	charred food, bone. 696 chips, 5 points, 148 sherds,
E1 17/66	S60E80 (3' x 10')	A0 zone	hammerstone 87 chips, 1 point, 2 sherds, 1
E1 17/67	S60E80 (5' x 7')	A0 zone	charred food. 109 chips, 4 points, 15 sherds, bone,
E1 17/68	S70E80 (5' x 7')	A0 zone	117 chips, 5 points, 12 sherds
E1 17/69	S60E90 (10' x 10')	A0 zone	672 chips, 24 points, 86 sherds, 2 chipped stone, charred food stuffs, bone.
E1 17/70	S70E90	A0 zone	4 chips
E1 17/71	S70E40	A0 zone	124 chips, 1 point, 8 sherds, bone.
E1 17/72	S80E20	A0 zone	84 chips, 3 points, 11 sherds
E1 17/73	S90E0-S80E0	A0 zone	pipe, charred food stuff. 106 chips, 2 points, 22 sherds, 1
E1 17/74	N50E0	Feat. 5	3 chips
E1 17/75	N50E0	Feat. 6	8 chips



McKinley (36 E1 17)  
(site)

COLLECTOR William Penn Memorial Museum YEAR 1975 ACCESSION 75.120

Catalogue Number	Square	Provenience Feature	Artifact Inventory
E1 17/76	N50E0	Feat. 6	15 chips, 2 sherds, charred food
E1 17/77	N40E0	Feat. 8	5 chips, 11 sherds
E1 17/78	N20E0	Feat. 10	32 chips, 2 points, 6 sherds, 1 anvilstone.
E1 17/79	N10E0	Feat. 11	39 chips, 1 point, 4 sherds, 1 bone. mod.
E1 17/80	N10E0	Feate. 12	9 chips, 3 sherds, bone
E1 17/81	N0E0	Feat. 13	18 chips, 3 sherds
E1 17/82	S75-85 E0	Feat. 15	(sherds in post E) 22 sherds
E1 17/83	S75-85E0	Feat. 15	(sherds in pasts A,B,I) 9 sherds
E1 17/84	S75-85E0	Feat. 15	1 chip, 44 sherds (sherds adjacent to feature)
E1 17/85	S90E0	Feat. 16	11 chips, 42 sherds
E1 17/86	S100W30	Feat. 16	49 chips, 2 points, 5 sherds, 1 bone pipe,
E1 17/87	S110W50-S100W50	Feat. 16	5 chips, 1 point
E1 17/88	S70W10	Feat. 18	2 sherds
E1 17/89	S60W10	Feat. 19	2 chips
E1 17/90	S30W20	Feat. 22	4 chips, 6 sherds







Mc Kinley (36 El 17)  
(site)

COLLECTOR William Penn Memorial Museum YEAR 1975 ACCESSION 75.120

[illegible]











